1. Inner speech (Martínez-Manrique & Vicente, 2015).
Format view: IS is a product of the language production system (e.g. phonological representations) that provides a representational format that is necessary for conscious thinking.
Activity view: IS is an activity which has many functions, parallel to those of OS, and is not necessary for conscious thinking.

2. IS as activity
Weak Activity View: IS is an activity which has many functions, parallel to those of OS.
Continuity of Function: The functions of IS are continuous with those of OS.
   --Methodological principle.
   --Adaptations.

3. IS as format
Weak Format View: One of the functions of IS is to serve as a format for conscious thinking.
   --IS doesn’t just assist thinking, but some IS is thinking.
Necessity Thesis: IS (or some other perceptually available symbolic medium) is necessary for conscious thinking.
   --Only sensory states conscious.
   --Nature of conscious thought.
How to reconcile with the Weak Format View with Weak Activity View & Continuity of function?
Conscious thinking is a linguistic activity.

Type 1
   Supported by a collection of autonomous subsystems.
   Mostly evolutionarily ancient.
   Shaped by biology and personal experience.
   Typically fast, automatic, non-conscious, parallel, contextualized, and independent of working memory.
Type 2
   Perhaps supported by a single system.
   Uniquely human.
   Shaped by culture and tuition.
   Typically slow, controlled, conscious, serial, decontextualized, and demanding of working memory.

5. Questions for DPT
Core features: What are the core features of each type of process?
Realization: How are the two processes realized in the brain?
Evolution: How and why did a new type of reasoning evolve?
Malleability: How could T2 processes be shaped by culture and tuition?
Attitudes: Is each type of reasoning associated with a separate set of propositional attitudes?

T1 reasoning is a subpersonal process; T2 reasoning involves performing intentional actions.
Explains the distinctive features of T2 processes: uniquely human; typically slow, controlled, conscious, serial.
Realization: T2 processes belong to a ‘virtual’ system.
Evolution: Development of T2 thinking did not involve significant new neural structures.
Malleability: Since they are actions, T2 processes are responsive to beliefs about how to reason.

7. Reasoning as acting
What is 21582 divided by 11?
   -- Intuitive response vs active procedure.
Procedures is dependent on and driven by subpersonal processes.
   --Each step involves subpersonal theoretical reasoning.
   --Actions involved are product of subpersonal practical reasoning.

8. A cyclic process
Symbols we produce need to be interpreted – no direct access to the intentions behind them (Carruthers, 2011).
   Action -> interpretation -> response -> action
   1. Produce symbols (written, spoken).
   2. Perceive symbols and interpret them as posing a sub-problem.
   3. Form beliefs about response to sub-problem.
   4. Decide to produce symbols expressing response.
   5. Produce further symbols. & -- Repeat
The actions keep restructuring the problem environment, and are essential steps in moving the procedure forward.
Creating, manipulating, and responding to an external problem environment.

Procedure heavily constrained by learned rules.

9. **Language-based T2 reasoning**

Model for T2 thinking, using natural language as symbolic medium.

We have some formal language-based reasoning procedures – e.g. constructing syllogisms.

Each utterance is interpreted as posing a sub-problem: What follows from this step?

Everyday conscious thought is also shaped by informal, context-sensitive principles.

Similar cyclic structure: produce utterance -> hear utterance and interpret as posing sub-problem -> form belief about response to this sub-problem -> utter response -> repeat.

10. **Example**

"Shall I go to the party?"

---posing sub-problem: What information is relevant to deciding?

Response: "Eric will be there."

---posing sub-problem: What will happen when I meet Eric?

Response: "He'll want to talk about the departmental meeting."

---posing sub-problem: Do I want to talk about the departmental meeting?

Response: "I can’t face that."

---posing sub-problem: If I can’t face the consequence of going, what should I do?

Response: "I won’t go."

11. **Objection: No cognitive role**

Utterances are not playing a cognitive role, merely an information-passing one.

---1) Connection. Even so, they may still be essential.

---2) Context. Not only passing information but passing it in a certain context.

---3) Selection. Utterance production has a selectional effect.

12. **Objection: Judgement & decision**

How can an act of speaking be a judgement or a decision?

---Maybe we can’t make conscious judgements and decisions.

---If so, then conscious thought is very fragile.

13. **Assertions as commitments**

Making up your mind or forming an opinion.

Conscious decisions and judgements are utterances that express a commitment to a plan, choice, or opinion.

Must be heard and interpreted as commitments at a subpersonal level.

Given a general desire to stick to our commitments, this will motivate us to act on our conscious decisions and judgements.

Debate between Peter Carruthers and me (Frankish 2004; Carruthers 2011; Frankish 2012; Carruthers 2013).

14. **Conclusion**

Some overt utterances are acts of thinking. They provide the perceptible sensory vehicle or format required for conscious, T2 thinking.

If IS is an internalization or abbreviation of outer speech, then it too can have this function.

Assumes only that IS (a) can be intentional, and (b) is processed and interpreted like overt speech.

This reconciles the Weak Format view with the Weak Activity View.

**References**


Evans JSBT and Frankish K (eds), *In two minds: dual processes and beyond*. Oxford University Press.


