

The Science of Behaviour Workbook 2

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Key Points Summary

1. Primary Neurochemicals

- **Serotonin:** Conscientious, cautious, orderly, calm; boosted by exercise; counteracts stress.
- **Dopamine:** Novelty-seeking, spontaneous, creative, energetic, sometimes impulsive.

2. Primary Hormones

- **Testosterone:** Competitive, independent, decisive, daring, focused.
- **Estrogen:** Caring, nurturing, supportive, idealistic, sensitive.

3. Brain Structure & Behaviour

4. ◦ Hemispheres

- Right: Creative, empathetic, processes novel information.
- Left: Analytical, systemizing, processes routine information.

5. ◦ Quadrants

Quadrant	Colour	Location	Dominant Behaviours
1	Green	Front–Right	Visionary, creative, big-picture thinking
2	Blue	Rear–Right	Supportive, empathetic, nurturing
3	Red	Rear–Left	Achieving, competitive, action-oriented
4	Gold	Front–Left	Organized, analytical, precise

Exercises

Exercise 1 – Self-Assessment:

Rate yourself 1–5 on traits below.
Higher serotonin vs. dopamine?

- Conscientious planning ☐1 ☐2 ☐3 ☐4 ☐5
- Spontaneous curiosity ☐1 ☐2 ☐3 ☐4 ☐5

Which profile feels more dominant?

Hormonal influencers

Hormone	Key Behaviours	Common Triggers
Testosterone	Competitive, decisive, tough-minded	Physical activity, challenges
Estrogen	Nurturing, empathetic, cooperative	Social bonding, caregiving

Exercise 2:

Think of two recent decisions—one assertive (Testosterone), one caring (Estrogen). How did each behavior help or hinder you?

Testosterone based decision

How did it hinder you?

Estrogen based decision

How did it hinder you?

Brain Hemispheres and Quadrants

- **Right Hemisphere** • Empathy, big-picture, novelty, creativity
- **Left Hemisphere** • Logic, routine, structure, language

Quadrant Mapping Exercise:

From the 3 activities below, mark its most dominant influencing colour quadrant:

1. **Painting a picture** → ☐Green ☐Blue ☐Red ☐Gold
2. **Planning a trip** → ☐Green ☐Blue ☐Red ☐Gold
3. **Solving a financial spreadsheet** → ☐Green ☐Blue ☐Red ☐Gold

Which two quadrants dominate your habits?

#1

#2

Activities

Your Behavioural Template combines:

1. **Neurochemicals** (Serotonin vs. Dopamine)
2. **Hormones** (Testosterone vs. Estrogen)
3. **Developed Habits** (learned pathways)
4. **Situational Responses** (momentary adaptations)

Exercise 2 – Profile Synthesis:

Review your serotonin/dopamine and testosterone/estrogen ratings by making a note of which of the below associated behaviours you exhibit more of the. time. Identify your two dominant “colours” (e.g. Gold+Green) based on the boxes that you have the most exhibited behaviours. Describe one personal strength and one challenge associated with that profile.

<p>SEROTONIN (mood control and conformity seeking)</p> <p>Serotonin is associated with the following behaviours:</p> <p>conscientious, conventional, cautious, but not fearful, detail oriented, persistent, precise, orderly, consistent, careful planners, calm.</p>	<p>DOPAMINE (novelty and reward seeking)</p> <p>Epinephrine is associated with the following behaviours:</p> <p>unconventional, uninhibited, optimistic, mentally flexible, spontaneous, creative, impulsive, curious, opportunistic, energetic, reckless.</p>
<p>TESTOSTERONE (dominance seeking)</p> <p>Testosterone is associated with the following behaviours</p> <p>competitive, independent, forthright, practical, aggressive, emotionally contained, decisive, direct, tough-minded, daring, focused.</p>	<p>ESTROGEN (empathy seeking)</p> <p>Estrogen is associated with the following behaviours</p> <p>caring, nurturing, sympathetic, idealistic, agreeable, supportive, sensitive, <u>kind hearted</u>, charitable, tolerant, unassuming, sentimental.</p>

Key strength #1

Personal challenge

Key strength #2

Personal Challenge

Action Plan

1. Enhance Your Low-Scoring Neurochemical

- If Serotonin is low: add a 20-minute walk or gym session daily.
- If Dopamine is low: schedule a novel activity (new hobby) weekly.

2. Balance Hormonal Drivers

- If Testosterone is high: practice collaborative listening exercises.
- If Estrogen is high: set a competitive personal goal to build decisiveness.

3. Quadrant Development

Pick one under-used quadrant: commit one “quadrant exercise” per week. e.g. Gold quadrant → Organize your workspace with a structured system.

4. Reflection & Adjustment

Journal weekly: note how shifting one driver affects your mood and outcomes.

Final Summary

By understanding how chemicals, hormones, and brain structure shape your behaviour, you gain actionable insight for self-development. Identify your dominant drivers, strengthen weaker areas, and harness this knowledge for better decision-making, communication, and personal growth.

Good luck, and keep practicing !

“Knowing yourself is the beginning of all wisdom.” — Socrates