

# 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?

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### 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

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# 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><b>SEROTONIN</b> (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><b>DOPAMINE</b> (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><b>TESTOSTERONE</b> (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><b>ESTROGEN</b> (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

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## 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.

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# 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