

## PERFORMING UNDER PRESSURE: A TENNIS SUPERPOWER

### Can an Ecological Dynamics approach help develop psychological resilience?

In this series, we have been looking at several 'unseen skills'. Tennis 'superpowers' that make or break success in tennis competition, which include:

- Problem solving
- Perception
- Decision-making/Technical Adaptability
- Performing under pressure

We will view these elements through the lens of an Ecological Dynamics (ED) approach ([for an introductory article on Ecological Dynamics, click here](#)).

In this article, we will explore the topic of ***Performing Under Pressure***. Every coach knows players who have 'never lost a drill.' However, when in competition, their clean and flowing strokes turn into a tangled mess. They are often known as 'practice-babies'.

Although every coach wants their players to perform under pressure, the typical way they design their practices often ignores or even hinders its development.

Pressure is inseparable from competitive tennis. Whether it's serving at 4-6 in the third-set tie-breaker, playing a rival, or competing for a national title, players inevitably encounter moments when the stakes feel high, and the environment demands more from them than usual.

Traditional approaches to pressure often focus on internal states—controlling emotions, managing thoughts, or 'staying calm.' While these strategies can be helpful, they place the burden on the athlete's internal world, which is notoriously unpredictable under stress.

We will look at how pressure emerges, how it shapes perception and action, and how training environments can be designed that build adaptability, resilience, and competitive readiness.

## PRESSURE REFRAMED

ED offers a radically different—and far more empowering—perspective. Instead of treating pressure as something that exists only within the athlete and must be controlled, ED views pressure as a relationship between the athlete and the environment. This shift opens the door to practical, trainable, and context-specific methods for helping players perform skillfully when it matters most.

Here are two important concepts needed to understand this ‘reframed’ view of pressure:

- **Pressure is a Property of the Athlete/Environment System**

In ED, performance is not the product of isolated internal processes. It emerges from the continuous interaction between the athlete and the environment. Pressure, therefore, is not simply ‘nerves’ or ‘mental weakness.’ It is a change in the constraints acting on the athlete.

If pressure is a *system property*, then the solution is not to ‘fix the athlete.’ *The solution is to help the athlete become more adaptable within the system.* The ED approach shifts the focus from exclusively internal control to functional adaptability.

- **Pressure occurs because of Changes in Constraints**

Pressure arises when constraints shift in ways that alter the athlete’s perception of affordances—the ‘*opportunities for action*’ available in the environment/situation. These constraints include:

- **Task constraints:** score, rules, match format, opponent tactics
- **Environmental constraints:** crowd noise, weather, court surface, lighting
- **Individual constraints:** fatigue, confidence, injury, emotional state

Pressure is not a mysterious psychological force. It is the natural result of constraints interacting in ways that challenge the athlete’s ability to perceive and act effectively.

These constraints can be manipulated by the coach in an ED method called ‘**The Constraints-Led Approach**’ to create practice environments that incorporate pressure.

Ecological dynamics does not reject psychological skills; it reframes them.

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*“The solution is to help the athlete become more adaptable within the system.”*

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## HOW PRESSURE AFFECTS PERCEPTION & ACTION

Under pressure, players often report feeling rushed, tight, indecisive, or disconnected from their game. ED explains these experiences through changes in the coupling between information and movement.

When players become overly internal—thinking about mechanics, outcomes, or consequences, they disrupt the natural coupling between what they perceive and how they act. The problem is not emotion itself; **it's the shift away from information**, reducing the quality of functional decision-making and crippling technical adaptability.

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*“Pressure is the result of constraints that have shifted the way players are coupled to the information in the environment.”*

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## Transfer of Learning

Before exploring further, it is important to review the concept introduced in the previous article called **‘transfer of learning’** (‘transfer’ for short). ([Here is a link to the article](#)).

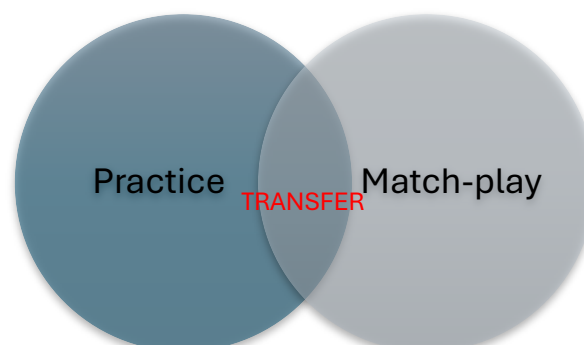
The concept is simple enough and captured in this phrase:

***“The transfer of learning from one situation to another is directly proportionate to the degree they are similar.”***

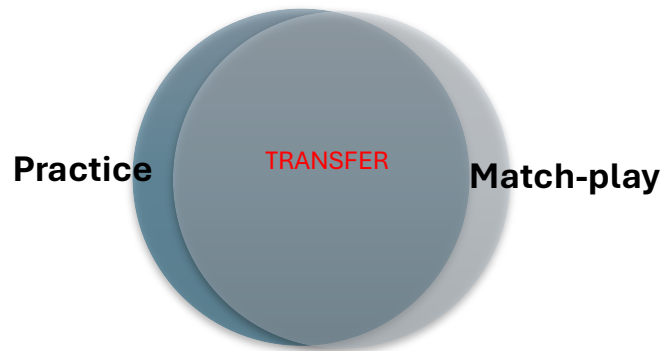
This is the measure and process by which practice and training are transforming a player’s match-play performance. Every coach has felt the frustration of spending time training things that players end up not using in matches. The laziest solution is for coaches to blame the player. However, I have found that a mirror provides the clearest view of the problem.

These diagrams depict the issue:

In this first diagram, situations 1 (Practice) and 2 (Match-play) are only slightly similar, so there is little overlap in skill transfer.



In diagram 2, the situations are very similar, leading to substantial overlap. Whatever is learned in situation 1 will mostly transfer to situation 2.



It is not that what is done in practice is not useful, just that the 'learning distance' is too far to have a relevant impact on how players perform in match play.

The reflection question to ask is: ***'Are my training sessions only providing the illusion of learning?'***

This is the tie-in to ED. Because it originates in research on how people learn and acquire skills, following this paradigm maximizes the potential of transfer.

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*“It makes little sense for coaches to train players in scripted, predictable drills to prepare them for the unscripted, unpredictable situations of match play.”*

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The glitch is not that coaches don't understand the concept of transfer; it is simply that they misunderstand what the 'similar' elements need to be to fuel the transfer, leading to questions like:

- *How can a basket load of backhand down-the-lines not show up in match-play? Aren't those the same shots used in match-play?*
- *What are the actual 'non-negotiable' elements that make practice and play similar for transfer to be maximized?*

As we have seen in this series, the answer is that what transfers are 'skills', not 'techniques'. ***Skills are movement solutions adapted to specific problems encountered because they are coupled with relevant information sources.***

Yes, there have to be racquets hitting forehand & backhands, there also needs to be:

- **An opponent** so the player can pick up critical situational information (e.g., the effect of their shot on the opponent, the opponent's location on the court relative to the player, etc.).
- **Decision-making** based on the shot received (e.g. if the reception dictates a Neutral, Defensive or Offensive response). Specifically, there needs to be *consequences* for unfavourable decisions.
- **A clear tactical intention** (e.g. based on the situation, does the player want to take away their time, move them around, etc.)
- **Competitive pressure** (e.g. from the score and opposition of an opponent)

Competition has fallen out of favour in recent years. It is often seen as detrimental to development and as the problem itself. Unhealthy competition is indeed damaging; however, since tennis is a competitive sport by nature, avoiding it means tennis is not being **played**.

It is the misplaced 'adult' and cultural values that can drag competition down. The positive aspects of competition are erased when '*Winning is everything, 'Opponents are enemies,'* and only the outcome matters.

Keep in mind that the word '*competition*' is derived from a Latin word meaning '**To strive together**'. The idea is that an opponent is required so both participants can be challenged (hopefully to the limits of their abilities), which is the only way for skills and character to grow.

This is what healthy competition aspires to achieve. The 'pressure' competition creates should be about challenging oneself, not just about winning against the opponent. It is the pressure of growth and becoming more than what you entered the competition with.

Since it is not easy to get there, sport (and sport coaches) play a critical role. Tennis coaches can expose players to the challenges of competition while supporting and guiding them to navigate it successfully, upholding these high values and ideals.

The basket load of backhands drill has none of these 'non-negotiables', making the situation too different to drive effective transfer.

## REPRESENTATIVE LEARNING DESIGN

One key component of ED is a method called '**Representative Learning Design**'. As the name suggests, the goal is to create practice activities that exemplify the game and all the 'non-negotiables' listed above.

Players who train in rich, representative environments develop a deep, embodied understanding of how to act under pressure. They don't rely on fragile mental strategies; they rely on skill.

## Not just a Method, but a Culture

Every player (and coach) knows the effect psychology has on play. People are not robots with movement programs that can be performed independently of their emotions, mindsets, attitudes, beliefs, and the situation.

The potential storms cannot be erased from play. However, players can be trained to ride the waves and, especially in an error-filled sport like tennis, constantly reorient to get back on track after a stumble. This is the quality of 'resilience' which is key to performing under pressure.

When it comes to handling pressure, the good news is, it is not a matter of '*some have it, and some don't.*' It can be systematically and intentionally enhanced through various coaching methods.

The challenge is that it's a long-term process that is as much about creating a culture of performing under pressure and handling it as about applying methods. A consistent environment with repeating messages, coach support, and emphasized values is required to develop the culture.

For example, one result of a culture of competition is that players adopt the identity of a '**competitor**'. To fight fiercely and fairly, giving the opponent the best possible challenge (for the benefit of both of their growth). Taking on the identity of a competitor means that players welcome (not dread) competition and '**Love the battle more than the win**'.

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*“A consistent environment with repeating messages, coach support, and emphasized values is required to develop the culture.”*

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## Coaching Applications

Here are some priorities when designing training (and your culture) that develop resilient competitors who can perform under pressure:

- **Add guided competition to as many practice activities as possible: (Culture of Competition)**

What is the percentage of basket and cooperative drills in your training? Swap out these activities for competitive, 'Oppositional Mini-games'. For example, instead of a cooperative overhead & lob drill, play a ½ court game starting with lobs and playing the point.

- **Use rules and scoring constraints to create adversity: (Culture of Handling Adversity)**

Competition must be included; however, it can be modified. Just like lifting weights 'overloads' your muscles, the scoring or rules can 'overload' the pressure. This 'adversity training' means that regular match-play will seem easier by comparison.

An example of a scoring constraint is that, if a player is ahead in the game (40-0, 40-15, 40-30) and doesn't win the point, the score reverses (e.g., they go from up 40-15 to down 15-40). Or, use a dice to roll what score players start with in a tie-breaker. These formats increase the perceived importance of each point, simulating match pressure

An example of a rules constraint would be the server only gets 1 serve (to develop 2<sup>nd</sup> serve). Or, they get 2 points if they can make the ball bounce twice on the opponent's side before they touch it. These 'high-stakes' scenarios will build experience in coping with adversity and provide confidence as they adapt successfully.

- **Encourage Problem-solving, Not Perfection: (Culture of Problem-solving)**

Under pressure, players need adaptability, not flawless technique. Problem-solving is the heart of performing under pressure. ([for an article earlier in the series about tennis as a problem-solving adventure, click here](#))

Each training session must be built around problems to solve. If players encounter them every session, they become more like enjoyable puzzles to solve than unclimbable mountain barriers. Match-play is just another set of familiar problems to tackle.

To facilitate this culture, coaches need to:

- Ask guiding questions
- Highlight tactical cues
- Reinforce exploration and encourage 'supported failure.'
- Avoid overcoaching mechanics during pressure activities

A coach who is calm, curious, and task-focused helps players adopt the same mindset.

- **Reframe Pressure as ‘Information’:**

Pressure becomes a signal, not a threat. Players learn to interpret arousal as increased readiness, heightened awareness and a cue to redirect focus on relevant information.

If pressure is viewed as an opportunity to connect with information, it reduces stigma, fear, and the tendency to internalize stress. Instead of ‘controlling thoughts,’ players learn to anchor attention to functional information:

- Opponent’s contact point
- Ball trajectory
- Court space
- Tactical cues

These anchors stabilize perception–action coupling.

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*“Pressure becomes a signal, not a threat. Players learn to interpret arousal as increased readiness, heightened awareness and a cue to redirect focus on relevant information.”*

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## Summary

Ecological dynamics reframes pressure from a psychological burden to a trainable aspect of performance. By understanding pressure as a property of the athlete/environment system, coaches and players can design training that builds adaptability, resilience, and competitive readiness.

When players learn to perceive and act effectively under varied constraints, pressure becomes less of a threat and more of a familiar part of the performance landscape. They don’t need to ‘fight’ pressure—they learn to function within it.

By creating a long-term culture that embraces competition, adversity, exploration, and reframing pressure as useful information, players develop adaptability, resilience, and the identity of a true competitor who can perform skillfully when it matters most.

This is the potential of ED: a practical, evidence-based, and empowering approach to helping athletes thrive when it matters most.