

# How to do Research Creatively

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What others know



New understanding

- Where do new ideas come from?
- PhD/Post Doc. training about this journey.

- The promise is with YOU.
- You are unique with particular strengths and weaknesses.
- Researchers are mental athletes: vigourous and focused.

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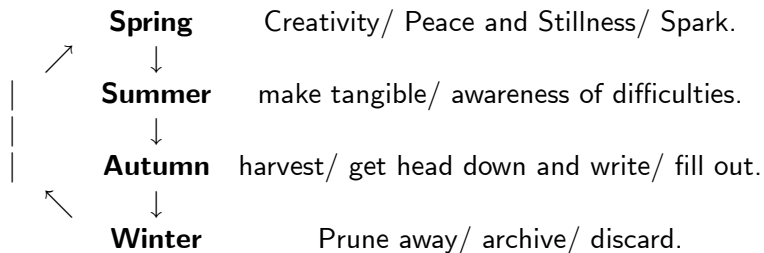
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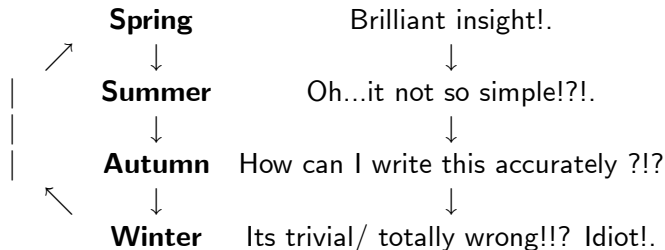
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- 5 Ask 'Why?'.
- 6 Get angry not upset.





Remember:

- This is a process all researchers engage in!
- Indeed if you're not engaging in this you are not really researching.

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- 8 Get lucky!: Be aware!
- 9 If you do make progress then record it CAREFULLY.

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- 7 Ask "Why do my results seem to work better than they should?"
- 8 **When you can't prove something, try to generalise it!**

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- 6 Being timid.
- 7 Be persistent but don't flog a dead horse!! Learn when to give up (at least temporarily!).

# Some Final Comments

- Difficult problems take time and struggle to solve.
- Important innovations are initially strongly resisted by the community: often angrily!
- Listen to criticism and others' intuition!
- Dare to fail!
- Be gentle with yourself: we are all stupid! But don't get up yourself either!
- Remember any research is provisional, improvable, generalisable and clarifiable. We are all on a journey. But each step forward advances our understanding and makes a contribution.

THANKS FOR YOUR ATTENTION!!