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# **PSY1102**

## **Introduction to Applied Psychology**

### **Class 3**

### **Nature and nurture (evolution)**

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# Agenda for today

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1. Parents and peers
  - a. Parents and early experiences
  - b. Peer influence
2. Cultural influences
  - a. What is culture?
  - b. Variation across cultures
  - c. Variation across time
  - d. Culture and the Self
  - e. Culture and child-rearing
  - f. Developmental similarities across groups

# Introductory comments

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- Today we'll look at the influence of parents, peers, and culture on development.
- In general, this topic continues the theme of nature vs. nurture, because:
  - Parents contribute genetic material (nature) to the child, and
  - Parents, peers, and culture contribute environmental material (nurture) to the child.
- We'll consider the extent to which our lives are shaped by these factors.

# 1. Parents and peers

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- a. Parents and early experiences
- b. Peer influence

## 1a. Parents and early experiences

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- Aside from contributing genetic material to their offspring, parents are also largely responsible for the environment in which their children are raised.
  - Cultural environment: language, religion, etc.
  - Economic environment: socio-economic status, etc.
  - Geographic environment: climate, urban/rural, etc.
  - Nutritional environment: acceptable foods, preferred foods, etc.
  - Intellectual environment: literacy, availability of books and music and art, etc.
  - Social environment: presence of extended family, number of friends, etc.

## 1a. Experience and brain development

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- The general pattern of neurological development of the brain is fixed for human beings. That is, development of the major structures of the brain is fixed genetically.
- Recent studies have looked at the development of finer structures of the brain (Rosenzweig), as well as the weight of brains (Kolb & Whishaw, 1998).
- One finding relevant to the nature-nurture debate relates to the richness of the connections made by individual cells in the cerebral cortex of the brain.
- Rats raised in enriched environments – that is, a complex cage, “toys”, and other rats – have cerebral cells with richer connections than rats raised in more impoverished environments.

## 1a. Experience and brain development: vision

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- In 1970, Blakemore and Cooper published a seminal paper on the visual development of kittens.
- Kittens were raised in total darkness except for an hour a day when they were put into a cylinder where the only visual stimulation was a set of horizontal stripes (for some kittens) and a set of vertical stripes (for others).
- These stripes were their only visual stimuli.
- When recordings were made from the kittens' visual cortex several weeks later, those kittens raised in a "horizontal environment" had a predominance of cells that responded only to horizontal lines; those raised in a "vertical environment" had mostly cells that responded to vertical lines.

[http://courses.washington.edu/psy333/lecture\\_pdfs/Week3\\_Day3.pdf](http://courses.washington.edu/psy333/lecture_pdfs/Week3_Day3.pdf)

## 1a. Experience and brain development: vision (cont'd.)

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- Normally, cats and monkeys are very visual animals, and have very good stereopsis – that is, the ability to see in three dimensions.
- In the late 1960s, David Hubel and Torsten Wiesel (Nobel Prize, 1981) raised cats and monkeys with one eye occluded, and showed that this treatment was associated with the failure to develop normal binocular connections to cells in the visual cortex.
- That is, in the experiments of Blakemore and Cooper and of Hubel and Wiesel, changes in the visual environment during development had a direct effect on the development of connections in the visual part of the brain.

[http://thebrain.mcgill.ca/flash/capsules/experience\\_rouge05.html](http://thebrain.mcgill.ca/flash/capsules/experience_rouge05.html)



## 1a. Experience and brain development: other areas

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- To what extent is the pattern of results described above for vision and brain development a general finding that applies to all areas of human development?
- We know there is a “critical period” for visual development. Is there also a “critical period” for athletic ability, or musical ability, or social awareness, or any number of other human characteristics? The evidence is not yet in.
- However, the children of parents who introduce them to new experiences in a guided and supportive way may have a broader general knowledge than others and may be more confident when facing novel situations later in life.
- In effect, children learn what they are exposed to. If they have harmonious family dynamics, they are likely to recreate these when they have their own families.

## 1a. Experience and brain development: a caution

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- Believing that, as a parent, you can help turn your child into an overachiever can backfire.
- It's important to realise that children are little “learning machines”, soaking up knowledge as they experience the world, and it can be short-sighted and counter-productive for parents to believe that they need to “programme” their children for success.
  - It is important for children to know that they are loved and valued for who they are, not for how many degrees they have or how much money they earn!

## 1b. Peer influence

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- Aside from parents, the other key players in the developing child's world are his or her peers, including siblings, friends, and acquaintances.
- Children learn about novel foods from friends, especially friends of different ethnicities.
- Children acquire their own language peculiarities from their peer group, much to the consternation of their parents.
- Children can learn about dangerous or anti-social behaviours from their peers.
  - Although tragic, children (and adults) learn about deadly risks through the deaths of other people. For example: Which snakes are deadly? Which mushrooms are edible? How high a roof can you jump from safely? How drunk must you be before you shouldn't drive?

## 2. Cultural influences

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- a. What is culture?
- b. Variation across cultures
- c. Variation across time
- d. Culture and the Self
- e. Culture and child-rearing
- f. Developmental similarities across groups

## 2a. What is culture?

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- The text defines culture as:
  - The behaviours, ideas, attitudes, values, and traditions shared by a group of people and transmitted from one generation to the next.
- You should evaluate for yourselves whether the textbook's distinction between human culture and the “culture” of some non-human species makes sense.
  - For example, if a species of monkeys begins washing food, and this habit spreads and is passed to the next generation, is this culture?
  - The same question can be asked about tool use and tool-making in some species of birds and great apes.

## 2a. What is culture? (continued)

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- One of the difficulties faced by a definition such as the one in the text is that, as we learn more about other species, it becomes more difficult to specify ways in which humans are qualitatively different.
- Discussions about topics such as this one can be helpful in sharpening your thinking about the nature of being human.

## 2b. Variation across culture: introduction

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Why can't I get a decent hamburger in this country?

Doesn't anybody here speak English?

Keep a tight grip on your purse –  
these people will rob you blind.

You're taking your life in your hands  
trying to cross a street in Montréal.

... and on and on.

## 2b. Variation across culture

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- If we live completely within our own culture, it is easy to believe:
  - that our way of doing things is the only way; and
  - that our way of doing things is “the right way” (because it’s the only way we know).
- It’s only by stepping outside our “comfort zone” that we come to appreciate the diversity of human cultures.
- There are many ways of coming into contact with other cultures, including:
  - living in a multi-cultural society;
  - attending public school or university;
  - travelling;
  - absorbing different media (books, films, music, etc.).



## 2b. Variation across culture (continued)

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- As described in the text, different cultures have different patterns of dress, different “personal boundaries”, different customs about touching the body of another person, etc.
- In addition, different cultures have different languages, and these languages pose their own challenges, such as:
  - the formal vs. familiar *you* in some European languages (e.g., the French *tu* and the German *du*); and
  - different logical structures (e.g., in German *wenn* means both *when* and *if*).
- Language differences raise the question of whether language creates thought or thought creates language.
  - The Whorfian hypothesis states that language creates the logical structure through which one sees the world.

## 2c. Variation across time

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- From my perspective – that is, my advanced age (!) – it is evident that cultures change across time.
- Cultures change within the lifetime of any one individual, but they also evolve across a larger time scale.
- Changes include such factors as:
  - dress (attire)
  - manners
  - language (vocabulary, grammar, and pronunciation)
  - foods
  - travel
  - courtship, marriage, and sexual behaviour
  - work, including the types of work done, where it is done, and the amount of time spent doing it

## 2d. Culture and the Self

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- The role of the Self vs. the community differs across cultures.
- In North America, there is more emphasis on personal achievement than on team or community effort, whereas in other societies the emphasis is reduced.
- In particular, traditional Chinese and Japanese cultures place greater emphasis on the community (although there is evidence that this is changing in China).
  - For example, in these cultures there is much more respect for elders than there is in Western society.
  - Moreover, there is less emphasis on one person's opinion and much greater emphasis on the community's perspective.

Nisbett, Richard E. *The Geography of Thought: How Asians and Westerners Think Differently ... and Why*. Free Press (Simon & Schuster), 2003.

## 2d. Culture and the Self (continued)

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- In North America, many Aboriginal cultures use a consensus-based approach to dealing with issues.
- For example:
  - In Nunavut and the Northwest Territories, voters elect legislative representatives who are independent (no party affiliation). The elected representatives then decide among themselves who will lead the consensus government.
  - Contrast this to the party bickering and attack ads seen in the rest of Canada, where the personality of the candidate is the main issue rather than how the candidate can work with others.
- Table 4.1 (page 157) in the text compares values in cultures that value individualism vs. those that value collectivism.

## 2d. Culture and the Self (concluded)

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- Consider marriage as an example:
  - In an individualistic culture, a husband or wife wants to have a good romantic life and financial security. If the partner is not willing and able to help meet these goals, divorce is possible so the person can pursue “personal fulfilment”.
  - In a collectivist culture, the husband and wife acknowledge that their marriage is one piece of the jigsaw puzzle that makes up the cultural fabric. Divorce is a failure that not only reflects badly on each of them, but by extension can bring shame to their parents and siblings, not to mention their children (if any).
- Which position is correct? The answer likely depends on your cultural perspective. On one hand, the person is trying to optimise his or her value as an individual in a competitive context; on the other hand, the couple subjugates personal goals for the good of society and the family.

## 2e. Culture and child-rearing

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- One of the decisions faced by new parents is how the children should be raised:
  - Should you require them to be obedient and to do what they are told to do, or ...
  - Should you encourage them to be independent and to question what they are told?

## 2e. Culture and child-rearing (continued)

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- As mentioned (above) in relation to marriage, some cultures have a sense of *family self*, where the family is the important entity and responsibility of the individuals within the family is to uphold the family honour.
- In terms of child care, busy Western societies often put a child on waiting lists for daycare before the child is even born.
  - The implicit decision is that the mother has a career to manage and that the family will be better off with two incomes;
  - A consequence is that the child is largely raised by third parties as part of a commercial arrangement.
- Other cultures expect one parent (typically the mother) to be responsible for child-rearing.
- “Advanced” Western societies also have parental leave.

## 2e. Culture and child-rearing (concluded)

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- Finally, remember that much of the environmental (nurture) input during a child's early development comes from the care-givers, whether the parents or someone else.
- Just as there are critical periods for visual development and language development, there may be sensitive periods for socialisation and acquisition of cultural values.



## 2f. Developmental similarities across groups

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- There are certainly differences across cultures, as well as within a culture. However, the size of these perceived differences can depend on perspective.
- To many people outside North America, Canadians and Americans are very similar if not identical. However, both Canadians and Americans see each other as being very different.
- To an outsider, Australian and South African English sound identical, but to Australians and South Africans the others have a pronounced accent.

# One language or two? An example

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Bands in the UK = Braces in North America



Braces in the UK



# One language or two? An example (continued)

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Braces in the  
UK



=

Suspenders in  
North America



Suspenders in  
the UK



# One language or two? An example (continued)

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Suspenders in  
the UK

=

Garters in North  
America



# One language or two? Summary

Location	Bands	Braces	Suspenders	Garters
UK				
North America				

# One language or two? Another example

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Braces in the  
UK



Suspenders in  
North America



Bretelles in France  
and Québec



# One language or two? Another example (cont'd.)

Bretelles in France  
and Québec



Bretelles in France  
and Québec



## Commonalities within a language group

- To some extent, if you know the vocabulary of one Romance language you can often make a good guess at many words in another Romance language – close enough that the listener may understand, and perhaps correct you.

	<u>French</u>	<u>Spanish</u>	<u>Italian</u>
exact	université	universidad	università
	liberté	libertad	libertà
	bonté	bondad	bontà
	égalité	igualdad	uguaglianza
different	santé	salud	salute



## Commonalities within a language group (cont'd.)

VERY SIMILAR WORDS ("good day")	
<u>Language</u>	<u>Word</u>
Czech	dobry den
Polish	dzien dobry
Russian	dobry dyen*
Serbo-Croatian	dobar dan
Ukrainian	dobry dyen

\* In the Cyrillic alphabet, this is written добрый день.

# Commonalities within a language group (concluded)

VERY SIMILAR WORDS	
<u>Language</u>	<u>Word</u>
English	coffee
French	café
German	Kaffee
Italian	caffè
Mandarin	ka fei
Spanish	café

## **2f. Developmental similarities across groups (cont'd.)**

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- At a detailed level, there are certainly noticeable differences between cultural groups.
- However, move up one level and it can be possible to observe a pattern to the differences.
- From a higher perspective, the commonalities among different human cultures will be apparent. It is important to note that humans around the world generally know how to greet each other and to interact with each other, although the finer-grained social niceties of one culture may indeed be foreign to other cultures.

## Summary: Class 3

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- As part of the nature-nurture issue, we have considered the roles of parents and peers in the development of the individual.
- In addition, we have looked at cultural influences, both at a low (molecular) level and at a higher level. As part of this, we've considered variations across cultures and variations across time.
- We've also looked at the role of culture in the role of the Self and the role of child-rearing.