

PSY1200 – Ideer til grønn tråd

Utarbeidet av Grønn tråd studentarbeidsgruppe ved Helena Anita Malvik, Anna Andrea Slagnes Dale and Charlie Dina Dickhausen

Lectures overview:

Course Logistics

Introduction to Developmental Psychology

Prenatal & Newborn Development (I. Tidemann, Chapter 2)

Biology & Behavior (Z. Ayorech, Chapter 3)

Cognitive Development (E. Augusti, Chapter 4)

Perception, Action & Learning in Infancy (I. T. Tidemann, Chapter 5)

Development of Language (L. E. Munoz, Chapter 6)

Academic Writing (I. T. Tidemann)

Conceptual Development (E. Augusti, Chapter 7)

Intelligence (Z. Ayorech, Chapter 8)

Social Development (I. T. Tidemann, Chapter 9)

Emotional Development (I. T. Tidemann, Chapter 10)

Attachment (K. M. P. Viana, Chapter 11)

Family (M. Edvoll, Chapter 12)

Friendship & Peer Relationships (K. M. P. Viana, Chapter 13)

Moral Development (N. H. Eftedal, Chapter 14)

Gender Development (R. S. Jessen, Chapter 15)

Conclusions (I. T. Tidemann, Chapter 16)

Eksamen:

Eksamensspørsmål til semesteroppgave (hjemmemeksamen) som ber studentene om å analysere effektene av klimaendringer på spesifikke begreper som dekket i kurset (f.eks. konseptuell utvikling, kognitiv utvikling, moralsk utvikling). Vi vil foreslå at å se på sammenhengen mellom barns forhold til natur/dyr og utvikling av sosiale relasjoner/konseptuell utvikling kan være passende.

Forslag til litteratur som kan inkorporeres i forelesninger:

Generelt (kan passe i flere forelesninger):

Barns forhold til dyr:

Developmental psychologists have largely neglected the study of children's relationship with animals even though animals are a primary focus in children's lives in a variety of forms: as live, stuffed, or imaginary companions; as captive or wild specimens; as zoo attractions; as targets of cruelty; as characters in books and on television; and as roles the children themselves assume (Melson, 2001, 2003; Myers, 2007; Myers & Saunders, 2002). Ask your students how many of them aspired at one time to be veterinarians or animal rescuers. In his book, *The significance of children and animals: Social development and our connections to other species*, Gene Myers (2007) describes ways that an anthropocentric focus in child development hinders our understanding of children's social, emotional, perceptual, and cognitive development. Gail Melson (2001) addressed this topic in her book, *Why the Wild Things Are*. Melson concurs with others who advocate a "biocentric" approach to the study of children's development (e. g., Kahn, 1999; Kahn & Kellert, 2002). She argues that a biocentric approach informed by the concept of "biophilia" (Kahn, 1997; Kellert, 1997; Kellert & Wilson, 1993;

Wilson, 1984) will enlighten our understanding of children's love relationships, their comprehension of living systems (see next topic), their play, their fears, and their sense of self. Importantly, interaction with animals, especially pets, is a primary way that children learn about caring and about biological processes, so it follows that children's concern for animals may serve as the foundation for broader ecological concern (Myers, 2007, 2013; Myers & Saunders, 2002).

Hentet fra Teach Green Psych: <https://www.teachgreenpsych.com/development/>

Barns preferanser for å leke i naturlige miljø:

Environmental psychologists have studied place preferences in both adults and children. Like adults, children show preferences for natural settings and report that nature offers restoration and relief from stress (e.g., Korpela, 2002; Simmons, 1994; Wells & Evans, 2003). Research on children has also explored preferences for play settings. Several studies have demonstrated children's preference for natural settings, especially those that provide a sense of refuge (e.g., Kirkby, 1989; Moore, 1986a, 1986b). Refuges in the form of forts and dens in natural settings are beloved play spaces for many children, perhaps because they represent areas under the children's control (Sobel, 2002). Natural play spaces offer developmental benefits. For example, researchers have found that children are more active in settings containing foliage, uneven ground, and natural materials such as rocks and mulch, and that such settings spark an increase in creativity and imaginative play (Nedovic & Morrissey, 2013). Ask students what were their favorite places to play.

Hentet fra Teach Green Psych: <https://www.teachgreenpsych.com/development/>

Biology & Behavior (Z. Avorech):

Konsekvenser av klimaendringer og gener hos barn:

Virolainen SJ, VonHandorf A, Viel KCMF, Weirauch MT, Kottyan LC. Gene-environment interactions and their impact on human health. *Genes Immun.* 2023 Feb;24(1):1-11. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9801363/>

Nettside fra Harvard University: <https://developingchild.harvard.edu/science/deep-dives/gene-environment-interaction/>

- Tidligere forelesning tar opp forholdet mellom gener og miljø
 - Effekten av miljøet avhenger av genene en har
 - At vi velger miljøet vi omgis av
 - Hva med effekten miljøet kan ha for uttrykk av genene våre?
- Kan trekke inn hvordan klimaendringene fører til endringer knyttet til food security, diet diversity, pollution, environmental toxins, exposure to diseases, socioeconomic factors, stress, og at dette kan ha konsekvenser for uttrykk av gener og dermed utviklingen hos barn

Cognitive Development (E. Augusti):

Forholdet natur-kognitiv utvikling:

Dadvand, P., Nieuwenhuijsen, M. J., Esnaola, M., Forns, J., Basagaña, X., Alvarez-Pedrerol, M., ... & Sunyer, J. (2015). Green spaces and cognitive development in primary schoolchildren. *Proceedings of the National Academy of Sciences*, 112(26), 7937-7942.

Abstract: Exposure to green space has been associated with better physical and mental health. This study aimed to assess the association between exposure to green space and measures of cognitive development in primary schoolchildren. This study was based on 2,593 schoolchildren in the second to fourth grades (7–10 y) of 36 primary schools in Barcelona, Spain (2012–2013). Cognitive development was assessed as 12-month change in developmental trajectory of working memory, superior working memory, and inattentiveness by using four repeated (every 3 months) computerized cognitive tests for each outcome. We assessed exposure to green space by characterizing outdoor surrounding greenness at home and school and during commuting by using high-resolution (5 m × 5 m) satellite data on greenness (normalized difference vegetation index). Multilevel modeling was used to estimate the associations between green spaces and cognitive development. We observed an enhanced 12-month progress in working memory and superior working memory and a greater 12-month reduction in inattentiveness associated with greenness within and surrounding school boundaries and with total surrounding greenness index (including greenness surrounding home, commuting route, and school). Adding a traffic-related air pollutant (elemental carbon) to models explained 20–65% of our estimated associations between school greenness and 12-month cognitive development. Our study showed a beneficial association between exposure to green space and cognitive development among schoolchildren that was partly mediated by reduction in exposure to air pollution.

Taylor, A. F., Kuo, F. E., & Sullivan, W. C. (2002). Views of nature and self-discipline: Evidence from inner city children. *Journal of Environmental Psychology*, 22(1), 49-63.

Abstract: Children growing up in the inner city are at risk of academic underachievement, juvenile delinquency, teenage pregnancy, and other important negative outcomes. Avoiding these outcomes requires self-discipline. Self-discipline, in turn, may draw on directed attention, a limited resource that can be renewed through contact with nature. This study examined the relationship between near-home nature and three forms of self-discipline in 169 inner city girls and boys randomly assigned to 12 architecturally identical high-rise buildings with varying levels of nearby nature. Parent ratings of the naturalness of the view from home were used to predict children's performance on tests of concentration, impulse inhibition, and delay of gratification. Regressions indicated that, on average, the more natural a girl's view from home, the better her performance at each of these forms of self-discipline. These findings suggest that, for girls, green space immediately outside the home can help them lead more effective, self-disciplined lives. For boys, perhaps more distant green spaces are equally important.

Conceptual Development (E. Augusti):

Konseptuell forståelse av drivhuseffekten:

Sören Frappart, Mylène Moine, Saïd Jmel & Olga Megalakaki (2018) Exploring French adolescents' and adults' comprehension of the greenhouse effect, *Environmental Education Research*, 24:3, 378-405 <https://doi.org/10.1080/13504622.2016.1147529>

- Målet med studien var å få innsikt i unge franskmenn sin konseptuelle utvikling angående drivhuseffekten
- 80 franske elever fra 7 klasse til voksen alder svarte på utsagn i en spørreundersøkelse om årsakene til, konsekvensene av, og løsningene på drivhuseffekten
- Prestasjonen økte etter hvert som man ble eldre: i hovedsak mellom 9 klasse og voksen alder

- Men deltagerne fortsatte å ha en svakere forståelse av årsakene til drivhuseffekten enn av dens konsekvenser og løsninger på den
- Deltagerne misforstod noen av utsagnene (pga vanskelige vitenskapelige ord feks), så kanskje dette kan ha hatt innvirkning på resultatet

Social Development (I. T. Tidemann):

Hahn, E. R. (2021). The developmental roots of environmental stewardship: Childhood and the climate change crisis. *Current Opinion in Psychology*, 42, 19–24.

<https://doi.org/10.1016/j.copsyc.2021.01.006>

<https://www-sciencedirect-com.ezproxy.uio.no/science/article/pii/S2352250X21000075>

- Trekke inn i forhold til sosialisering og læring?

Utdrag fra teksten:

In addition to the natural environment, the social world also plays a central role in children's environmental knowledge, attitudes, and behaviors. Middle school students report learning about climate change at school and through media coverage [29]. Peers constitute another important socialization agent [30,31], and they become more predictive of children's environmental behaviors with age [32].

Parents are one of the most powerful socialization forces for children's developing sense of environmental stewardship [30,33,34]. Family conversations about climate change predict children's self-reported ecological behaviors [35]. Beyond conversations, parents also serve as models of environmentally responsible choices [36]. Parental behaviors — not their attitudes or concern about climate change — have been associated with children's environmentally friendly behaviors. Longitudinally, the environmental attitudes held by mothers predict those of their children 12 years later [23].

- Forelesningen nevner også rolletaking, kan eventuelt trekke dette opp mot dette som står i artikkelen (utdrag under), eller dra inn under moral development (jeg har lagt inn studien der)
 - **Utdrag:** Viewing the environment as a moral concern begins in the first several years of life. Three-year-olds equate behaviors that harm the environment and those that target another person, judging both to be wrong [40]. Just one year later, however, children perceive behaviors that harm the environment as being less severe than those that target another person. In addition, early moral views of the environment appear to be pliable. Preschoolers' moral judgments of environmental harm were influenced by a task in which they took the perspective of a storybook character who was either the victim or the perpetrator of environmental damage [40].

Emotional Development (I. T. Tidemann):

Mental helse:

- Det er to slides i forelesningen fra høsten 2022 som omhandler mental health
 - Den ene tar blant annet opp mental helse som en refleksjon av well-being (trygge og sunne omgivelser), men også stress (periodic, traumatic, prolonged)

→ Enkel kobling til klima

Unicef-nettside: <https://www.unicef.org/reports/climate-changed-child>

Vergunst, F., & Berry, H. L. (2022). Climate Change and Children's Mental Health: A Developmental Perspective. *Clinical Psychological Science*, 10(4), 767-785. <https://doi-org.ezproxy.uio.no/10.1177/21677026211040787>

Abstract: Climate change is a major global public-health challenge that will have wide-ranging impacts on human psychological health and well-being. Children and adolescents are at particular risk because of their rapidly developing brain, vulnerability to disease, and limited capacity to avoid or adapt to threats and impacts. They are also more likely to worry about climate change than any other age group. Drawing on a developmental life-course perspective, we show that climate-change-related threats can additively, interactively, and cumulatively increase psychopathology risk from conception onward; that these effects are already occurring; and that they constitute an important threat to healthy human development worldwide. We then argue that monitoring, measuring, and mitigating these risks is a matter of social justice and a crucial long-term investment in developmental and mental health sciences. We conclude with a discussion of conceptual and measurement challenges and outline research priorities going forward.

“Coping” og klimaendringer:

Hentet fra review-artikkel: Maria Ojala (2023) How do children, adolescents, and young adults relate to climate change? Implications for developmental psychology, *European Journal of Developmental Psychology*, 20:6, 929-943, DOI: [10.1080/17405629.2022.2108396](https://doi.org/10.1080/17405629.2022.2108396)

In two studies with children (ages 11–12) and adolescents (ages 16–18), meaning-focused coping in relation to climate change was positively related to all aspects of subjective well-being (Ojala, 2012a, 2013). In this context, meaning-focused coping consists of both an ability to switch perspectives between focusing on the grave prospects related to this problem and positive aspects like the fact that more and more people are taking climate change seriously nowadays (positive-reappraisal), but also to invest trust in different societal actors. Some young people also use a kind of defiant hope, where they are rather pessimistic but force themselves to feel hope (Ojala, 2012b). From a developmental psychology perspective, it is also interesting that there seem to be age differences regarding meaning-focused coping, where a younger age group, 11–12-year-olds, used less meaning-focused coping in the form of positive reappraisal than older age-groups, which could be due to the fact that this strategy is complex and requires mature cognition that many in the younger age-group do not yet have (Ojala, 2012b). The youngest age group, on the other hand, experienced more trust in science than the older age groups, and they also felt more hopeful overall, perhaps because they do not yet understand the complexity and graveness of climate change as late adolescents and emerging adults more often do. Age differences like these are of vital interest for developmental psychologists and should be investigated further in future studies.

Moral Development (N. H. Eftedal):

Hentet fra Teach Green Psych: <https://www.teachgreenpsych.com/development/>

Related to the the topic of children's cognitive understanding of the natural world is the issue of how they value nature. Peter Kahn (1997, 2002; Kahn & Friedman, 1995) conducted extensive cross-cultural interview research with children, young adults, and their parents, asking them about their environmental values and moral reasoning about environmental degradation. He observed two primary forms of environmental moral reasoning in children: "anthropocentric" reasoning, in which concern stems from how effects on the environment affect humans (e. g., pesticide contamination is bad because it harms human health), and "biocentric" reasoning, in which the natural world is valued intrinsically (e. g., wildlife protection is good because all living things have the right to exist).

Kahn and others (e.g., Hussar & Horvath, 2011) have found that in general, children tend to be more morally concerned about people than other species, with older children more likely to exhibit biocentric reasoning than younger children. This may be related to older children's more advanced understanding of natural systems. For example, one study found that the older children were, the more likely they were to recognize that animals need healthy habitat, not just food and water (Myers, Saunders, & Garrett, 2004). When children exhibit biocentric moral reasoning, they tend to emphasize *animal* welfare with less regard for plant life, possibly because their awareness of plants as "alive" develops later than their awareness of animals (Melson, 2013).

Evaluering av miljøvennlig atferd i 7-mnd. Gamle babyer:

Alessandra Geraci, Laura Franchin, Silvia Benavides-Varela, (2023) Evaluations of pro-environmental behaviors by 7-month-old infants, *Infant Behavior and Development*, Volume 72, <https://doi.org/10.1016/j.infbeh.2023.101865>.

- Forslerne lurte på om 7 måneder gamle babyer hadde en følelse av miljømessig moral
- Babyers evaluering av to pro-miljømessige handlinger ble vurdert både ved en 'looking task' (hvilken agent så de på lengst) og en 'reaching task' (se på begge agentene og velge en av dem)
- I eksperiment 1 ble den åpenbare oppførselen av å beskytte miljøet (agenten samlet kunstige objekter som lå spredt på en plen) sammenlignet med den miljøskadelige handlingen (agenten lot objektene bli på plenen)
 - Babyene strakk seg etter samleren signifikant mer enn ikke-samleren
 - I kontrollforholdet (der naturlige, fremfor kunstige, objekter ble plassert på plenen) ble det ikke observert noe reaching preferanse
 - Fant ikke noe looking preferanse for hvilken av agentene de så mest
- I eksperiment 2 ble den skjulte atferden av å beskytte miljøet (man beholdt de kunstige objektene inni en beholder) sammenlignet med den miljøskadelige atferden (man kastet alle objektene ut over plenen)
 - Fant ikke noe bevis for babyenes visuelle eller reaching preferanse verken i eksperiment eller kontrollgruppen

--> ser ut til at babyer foretrekker pro-miljømessige atferder som å rydde opp, men har ikke utviklet noe preferanse for andre miljøvennlige handlinger som å ikke kaste ting på bakken

Hahn, E. R., & Garrett, M. K. (2017). Preschoolers' moral judgments of environmental harm and the influence of perspective taking. *Journal of Environmental Psychology*, 53, 11–19.
<https://doi.org/10.1016/j.jenvp.2017.05.004>

Utdrag:

We asked whether preschoolers view the environment as a moral concern. In Study 1, preschoolers rated the morality of actions that harmed either the environment or another person, as well as non-harmful behaviors. 3-year-olds equated behaviors that harmed the environment with those that targeted people. Older preschoolers, however, rated behaviors that harmed people as being worse than those that damaged the environment. In the second study, we experimentally tested whether preschoolers' moral evaluations could be influenced using a perspective-taking task. Children who took the perspective of a book character who was the victim of environmental harm rated environmentally irresponsible behaviors more severely than children who took the perspective of a character who caused environmental damage. Together, the studies provide preliminary evidence that children as young as 3 years view environmental behaviors in moral terms and that these early judgments are malleable. The research has implications for environmental education.

Prenatal & Newborn Development (I. Tidemann, Chapter 2)

Kidd, S. A., Gong, J., Massazza, A., Bezgrebelna, M., Zhang, Y., & Hajat, S. (2023). Climate change and its implications for developing brains – In utero to youth: A scoping review. *The Journal of Climate Change and Health*, 13, 100258. <https://doi.org/10.1016/j.joclim.2023.100258>

- Forelesningen trekker inn the prenatal period as a sensitive period, og nevner ting som kan være skadelig for fosteret, inkludert environmental pollutants, nutrition og disease.
- Kan trekke inn dette fra artikkelen:
 - The implications of climate change for healthy brain development represent a prototypical example of these complex and cross-cutting relationships. This is a function of the nature of the brain itself. The brain is exceptionally sensitive to a wide range of threats across critical developmental periods as it is positively influenced by a plethora of biological, environmental, and social factors.
 - Examples of the far-reaching implications of climate change for healthy brain development include impacts on developing fetuses, vector-borne illness, malnutrition, air pollution, and the degradation of and reduced access to key infrastructures such as education and healthcare systems.
- Dette blir kanskje litt det samme som i biology and behavior kapittelet, men kanskje det nesten er mer tydelig å ha med her?