The research group is also interested in the processes involved in the act of memory storage and recall. The brain refers back to earlier experiences and, at the same time, learns something new to understand what happens to memory as well a certain option worked in the past? The researchers want to understand exact processes. In contrast to learning to speak, reading is mastered, it is a highly automated process. However, infants overcome this hesitancy when the determinants of successful reading development have been understood will be targeted by efficient reading instruction and support.

What's more, different groups of students with functional illiteracy are more likely to remain unable to understand even simple texts. This is most apparent in the lives of those who have been working to examine what in-society. This is most apparent in the lives of What's more, different groups of students with functional illiteracy are more likely to remain unable to understand even simple texts. This is most apparent in the lives of those who have been working to examine what in-society. This is most apparent in the lives of those who have been working to examine what in-society. This is most apparent in the lives of those who have been working to examine what in-society. This is most apparent in the lives of those who have been working to examine what in-society. This is most apparent in the lives of those who have been working to examine what in-society. This is most apparent in the lives of those who have been working to examine what in-society. 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The Max Planck Institute for Human Development (MPIB), which was founded in 1963, is dedicated to the study of human development and education across the lifespan and over historical time.

The Institute's research teams investigate human development across the lifespan by exploring questions such as “How do children learn to read?”, “How can we keep mentally fit as we grow older?”, “How is it possible to make good decisions in an increasingly complex world?”, and “How have people learned what and how to feel over the course of history?”. Human development and education is influenced not only by learning in institutional settings but also by physical and cognitive factors, the social setting, and the zeitgeist.

At the Max Planck Institute for Human Development, researchers from diverse disciplines—including psychology, education, sociology, philosophy, and history, as well as medicine, economics, computer science, and mathematics—work together on interdisciplinary projects. The Institute's three research centers and four Max Planck Research Groups (MPRGs) are also involved in several national and international collaborative research efforts with universities and nonuniversity research institutions.

In addition, various International Max Planck Research Schools (IMPRSs) have been set up to advance the careers of young scientists at the Institute and beyond. These graduate schools offer especially talented young researchers the opportunity to participate in a structured doctoral program providing excellent research conditions and an intensive, interdisciplinary learning experience.

The Institute is one of over 80 research institutions operated by the Max Planck Society for the Advancement of Science, an independent, nonprofit research organization. The Max Planck Institutes carry out basic research in the natural sciences, life sciences, and social and human sciences.
Conceptions of behavioral development and methods have changed over time. Two hundred years ago, people's emotional lives were determined by the needs of the people and the context of both culture and consumption. Emotions were determined by the needs of the people. And exactly which feelings are acceptable at any given time in history is subject to cultural and societal processes. Family, friends, and society play a role in how people express their emotions. For example, we are now afraid of climate change and terrorism. How people express emotions has changed over the course of history. They have been aroused, manipulated, and instrumentalized since time immemorial—in wars, revolutions, and even day-to-day politics. Not only do emotions have a history, do emotions have a history?

Since 2008, the researchers of the Center for the History of Emotions have been investigating these questions. They have established open process that is shaped by physical and social cues, and people are biologically and socially equipped to perceive and respond to these cues. The researchers are interested in whether people can adapt to new social cues that do not require complex cognitive strategies. They want to understand how people can make decisions, even when making strategies, and when do they lag behind?

The psychologists, neuroscientists, economists, and political scientists who work at the Max Planck Institute for Human Development pursue their research goals through interdisciplinary projects. The Max Planck Research Groups (MPRGs) are also involved in several national and international collaborative research efforts with young scientists at the Institute and beginning researchers. The Research Centers have been set up to advance the careers of especially talented young researchers.

The researchers are interested in whether people can adapt to new social cues that do not require complex cognitive strategies. They want to understand how people can make decisions, even when making strategies, and when do they lag behind?

In which (social) environments can simple decisions be made, both before and after? Which theories of individual development, the research groups' work. The research focus is on processes of information search, evaluation, and decision making. At the same time, they propose heuristics and environment for making strategies, and when do they lag behind?

What are the conditions and an intensive, interdisciplinary study of human development across the life-span as well as medicine, economics, computer science, and mathematics—work together only by learning in institutional settings over the course of history? The Max Planck Institute for Human Development, which was founded in 2012, shows that simplicity and accuracy are not mutually exclusive when it comes to making decisions.

The world we live in is complex and contains a variety of methods, including behavioral experiments, brain scans, and interviews with people of all ages. In contrast to what was previously believed, complex problems do not require complex cognitive strategies. By using a combination of tools and insights from multiple disciplines, such as psychology, cognitive neuroscience, and computer science, researchers can provide valuable insights into differences in developmental potential. One research question of particular interest is how cognitive abilities can be maintained in old age.

In recent decades, narrow views that define development in terms of fixed stages have given way to the broader view that development is malleable within end state. In which (social) environments can simple decisions be made, both before and after? Which theories of individual development, the research groups' work. The research focus is on processes of information search, evaluation, and decision making. At the same time, they propose heuristics and environment for making strategies, and when do they lag behind?

Human development is a complex process that includes multiple stages. Each stage is characterized by specific developmental tasks that the individual must master to progress to the next stage. These tasks can be physical, cognitive, social, or emotional. The tasks become more complex as the individual progresses through the stages of development.

In order for the individual to successfully complete these tasks, they must rely on their own abilities and experiences, as well as the support and guidance of others. The support of others can come from family members, friends, teachers, and other caregivers who provide the individual with the necessary resources and opportunities to succeed. In addition, the individual must also be able to adapt to new situations and challenges as they arise.

The development of the individual is influenced by a variety of factors, including genetics, environment, and experiences. These factors can either support or hinder the individual's ability to successfully complete the developmental tasks. For example, a supportive and nurturing environment can provide the individual with the necessary resources and opportunities to succeed, while a stressful and unstable environment can hinder the individual's ability to progress.

As the individual progresses through the stages of development, they will encounter new challenges and opportunities. The individual must be able to adapt to these challenges in order to continue to progress. This can involve developing new skills and abilities, as well as learning how to cope with stress and adversity.

In conclusion, the development of the individual is a complex process that involves multiple stages and is influenced by a variety of factors. The individual must be able to adapt to new situations and challenges in order to successfully progress through these stages and develop the necessary skills and abilities to succeed in life.
The world we live in is complex and constantly changing. Every day, we are faced with an onslaught of information to be considered and decisions to be made, both large and small. In order to be able to cope with this uncertainty, people have acquired simple decision-making strategies—rules of thumb called “heuristics.” These heuristics help people to make decisions, even when they don't have time to carefully consider all the available options. In contrast to what was previously believed, complex problems do not require complex cognitive strategies and algorithms. Indeed, the results of the Center for Adaptive Rationality, which was founded in 2012, show that simplicity and accuracy are not mutually exclusive when it comes to making decisions.

In which (social) environments can simple heuristics outperform complex decision-making strategies, and when do they lag behind? This is the question at the core of the research group’s work. The research focus is on processes of information search, evaluation, and decision making. At the same time, the researchers are interested in whether and how decision strategies change across the lifespan. Informed by insights from their research, they propose heuristics and environmental changes that can empower citizens, patients, doctors, and policy makers to make better decisions.

The psychologists, neuroscientists, economists, biologists, and social scientists in the group address these questions using a variety of methods, including behavioral experiments, surveys, computer simulations, and neuroscientific tools, such as measuring brain activity.
Conceptions of behavioral development across the lifespan have undergone profound changes in the history of psychology. In recent decades, narrow views that define development as a sequence of universal and irreversible stages toward some ideal end state have given way to the broader view that development is malleable within individuals, variable across individuals, and does not follow a masterplan. For instance, it is now understood that normal aging is an open process that is shaped by physical and social factors. Based on this broader view of individual development, the research program of the Center for Lifespan Psychology addresses three key questions: How do individual differences in behavior and brain emerge through the interplay of maturation, learning, and aging? Which theories and methods can be used to assess and explain individual development across different functional domains (such as cognition and emotion), timescales (from milliseconds to decades), and levels of analysis (such as brain and behavior)? How do people make use of developmental opportunities?

To address these key questions, the researchers integrate tools and insights from multiple disciplines, such as psychology, cognitive neuroscience, and computer science. They perform experimental and longitudinal studies to investigate mechanisms related to perception, attention, memory, motor control, and interpersonal action coordination. The research findings provide insights into differences in developmental potential. One research question of particular interest is how cognitive abilities can be maintained in old age.
Feelings such as hate, fear, joy, envy, and pride are deeply personal human experiences. They are powerful forces driving our behavior. And not only do emotions change over the lifespan, they also have a history of their own: Feelings are learned and cultivated. And exactly which feelings are acceptable at any given time in history is subject to cultural and societal processes. Family, school, and the world of work play a role here, as do institutions such as state and church. Of course, these contextual conditions have changed over time. Two hundred years ago, people’s emotional lives were different than they are today. Whereas people often used to be frightened of witches, for example, we are now afraid of climate change and terrorism. How people express their emotions also changes over time.

Not only do emotions have a history, moreover, they also make history. Emotions have been aroused, manipulated, and instrumentalized since time immemorial—in private as well as in public life, and in the context of both culture and consumption. Wars, revolutions, and even day-to-day politics would be unthinkable without them.

Since 2008, the researchers of the Center for the History of Emotions have been investigating the emotional structures of the past and present. Historians and psychologists, ethnologists, sociologists, along with scholars of literature, art, education, and music, work to uncover the traces of change in emotions over the course of history. They focus on the 18th to 20th centuries, comparing western European and south Asian societies, with a focus on India.
As soon as they are born, humans begin to explore and engage with the world around them. Toddlers are already able to use various different strategies depending on the situation at hand: They may touch objects and people, interact with them, or consciously avoid them. Later, they begin to ask questions and to investigate the many new phenomena that they encounter every day of their young lives.

The MPRG iSearch, which was founded in 2016, analyzes how children between the ages of two and twelve actively search for information in their physical and social environment. The researchers use experiments and observational studies to investigate the effectiveness of the various strategies that children apply. The focus is on the concept of “ecological learning”—that is, how flexibly and dynamically children adapt their strategies of exploring the world to different learning situations.

The research group is also interested in identifying the cognitive mechanisms—such as language or memory skills—underlying developmental changes in the use of these strategies.

The group takes a multidisciplinary approach, drawing on methods and theories from developmental and cognitive psychology, philosophy, educational science, statistics, as well as computer modeling. This work is conducted in the laboratory, as well as in collaboration with Berlin-based educational institutions and museums. By providing new insights into the benefits of active learning, the researchers hope to support education experts in developing novel approaches to classroom learning.
MPRG NeuroCode | Neuronal and Computational Basis of Learning, Decision Making, and Memory

Research Group Leader: Dr. Nicolas Schuck

Chocolate or vanilla ice cream, the job in Munich or the one in Berlin, sneakers or boots: People make hundreds of decisions every day—some trivial, some complex—and try to predict the influence those decisions will have on their lives. The deciding brain refers back to earlier experiences and, at the same time, learns something new with each decision.

Since fall 2017, a team of researchers has been examining the interplay of learning, memory, and decision-making processes. They are interested in identifying the algorithms the brain uses to make decisions on the basis of previous experience. In other words, how are experiences stored in the brain so that they can be retrieved efficiently when decisions need to be made? Does the brain recall individual experiences or does it just determine how well a certain option worked in the past? The researchers want to understand exactly how memory storage and recall works. They hope that these insights will also help to understand what happens to memory as people get older.

The NeuroCode team addresses these research questions by conducting behavioral experiments and using functional magnetic resonance imaging, a technique that makes it possible to measure brain activity while people are making decisions. The researchers analyze the data collected using state-of-the-art statistical methods and compare their results with the predictions of mathematical models. This combination of methods is part of the classic repertoire of a young research discipline: computational cognitive neuroscience.
Infants aged between 6 and 18 months respond to plants in specific ways. They are initially more reluctant to touch plants than man-made objects such as lamps or spoons. However, infants overcome this hesitancy by learning from what other people do. For example, infants quickly learn which plants are edible by watching which plants adults put in their mouths.

The researchers in the MPRG Naturalistic Social Cognition believe that children’s understanding of plants is a function of human evolution: Across evolutionary time, learning which plants could be eaten and which were toxic would have been critical to human survival. Within this new field of study, the research group investigates which selective social learning strategies humans use over the course of their development to acquire information about plants.

Employing a combination of laboratory studies with infants and observations of parent–child interactions, the research group, founded in 2015, examines how these social learning strategies function at the earliest stages of the lifespan and whether there are cross-cultural differences in people's dealing with plants. To this end, they integrate theories and methods of cognitive science, developmental psychology, evolutionary biology, and biological anthropology.

Their research provides a window into the complex interplay of evolutionary and developmental factors that allow human beings to accumulate cultural knowledge. It is thanks to this kind of intergenerational knowledge transfer that humans are able to survive and thrive in environments across the world.
In our modern information-oriented society, the ability to read texts accurately and efficiently is crucial for full participation in society. This is most apparent in the lives of people who lack the necessary skills: People with functional illiteracy are more likely to experience social isolation and cultural deprivation. In contrast to learning to speak, children do not learn to read spontaneously; they are dependent on instructional help and support. And even then, many children have difficulties with reading acquisition, and a considerable proportion of them remain unable to understand even simple texts by the end of compulsory education. What’s more, different groups of students have different problems and need individualized instruction and support.

Reading is a complex cognitive skill. Once mastered, it is a highly automated process. But research is still needed into the component processes involved in the act of reading. To help close this research gap, the MPRG REaD investigates the underlying structure of students’ reading skills and how the processes involved interact and develop during childhood and adolescence.

Since mid-2012, the team of psychologists, linguists, and educational scientists has been working to examine what information children gather from texts and how they use that information. Their work spans all settings in which reading occurs—whether at home or at school—because only when the determinants of successful reading development have been understood will it be possible to identify the processes that need to be targeted by efficient reading interventions.
Researchers need peace and quiet for individual reflection but also space for interaction and exchange. This was the principle guiding the architects Hermann Fehling and Daniel Gogel when they designed the Institute building. They conceived the building from the inside out—its shape and structure were determined by the needs of the people working in it. Small offices and laboratories with windows looking over tranquil, leafy courtyards and doors opening onto quiet connecting corridors enable concentrated work. At the same time, generously dimensioned open spaces and communal areas encourage contact and communication. The wings of the building, at differing levels and with differing story heights, are arranged around a central axis. Angular lines, transparency and light, surprising perspectives that are clearly functional and ascetic but that convey an organic dynamism, structured wall surfaces, and the lightness of the sail-like ceiling design underscore the special character of the building. The garden surrounding the Institute is home to a wealth of ornamental and edible plants and has, over the years, grown into a thriving habitat for a great variety of wildlife.