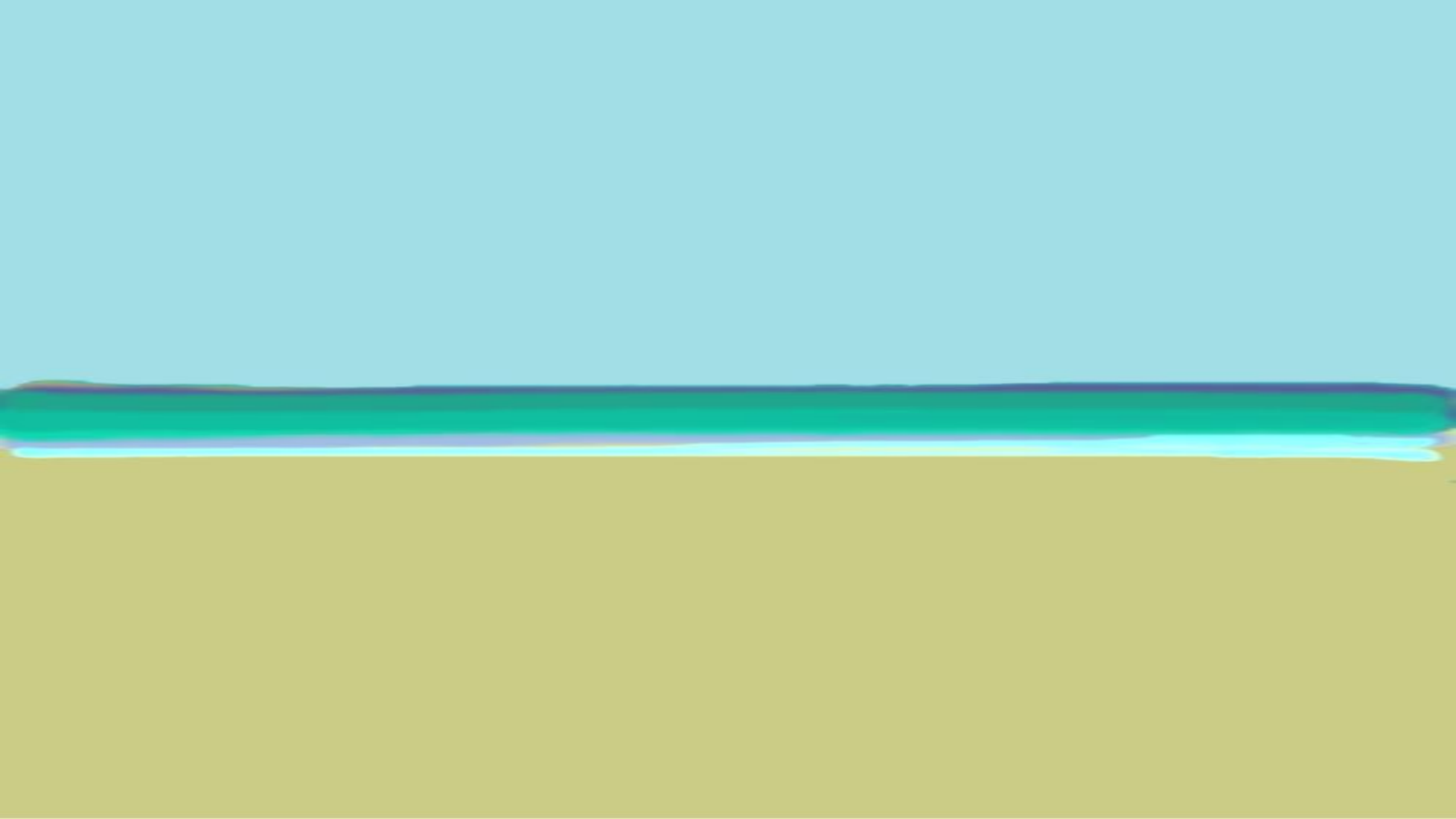


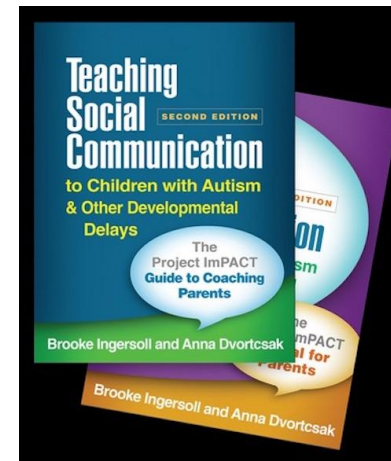
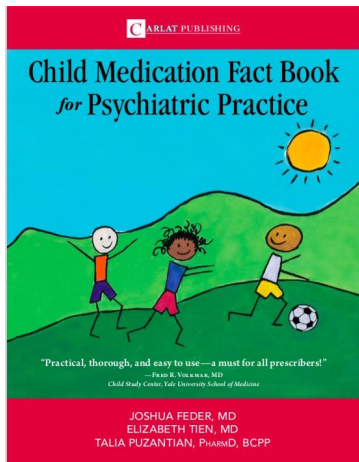
Developmental delay, diagnosis and tools

Joshua Feder, MD - Nablus, November 2019



Disclosures

- Editor in Chief – The Carlat Child Psychiatry Report
- Fielding Graduate University – teaching developmental disorders
- Medical Director - QSI-Intellivision: Connection Coder/ games
- UCSD/ SDSU research - Bridge/ Success





grap
hic
medi
cine



MAGE COPYRIGHT THOM FERRER 2011

شكرا

- Dr. Ali Shaar
- INPB – Siobhan Fitzpatrick, Pauline Walmsley, et. al.
- ECPC- Rimah Saleh, Jim Lechman, et. al.
- Fielding / Early Years Research & Development Team: Zoe Kernohan-Neeley, Yvonne Tracey, Deb Sussman, Erin Jipner, Sara Clancey, Maria Lynch, Jill Fergus, Annie Wolverton, and many many others
- San Diego Colleagues: Mara Goverman, Marilee Burgeson, Lauren Brookman-Fraze, Aubyn Stahmer, Sarah Reith
- Caron!

Developmental delay, diagnosis and tools

Outline

1. A method to treat stress in children and families went into the field of autism and developmental disorders.
2. In the field of developmental disorders, the method developed and evolved.
3. The method changes assessment and treatment of developmental disorders, particularly autism.
4. The evolved method has now been brought back to the field of trauma and stress to help children and families.

1. A method to treat stress in children and families went into the field of autism and developmental disorders

1970s: Greenspan & Wieder:
self-regulation and responsive care
helps children under stress.



The method is centered on the

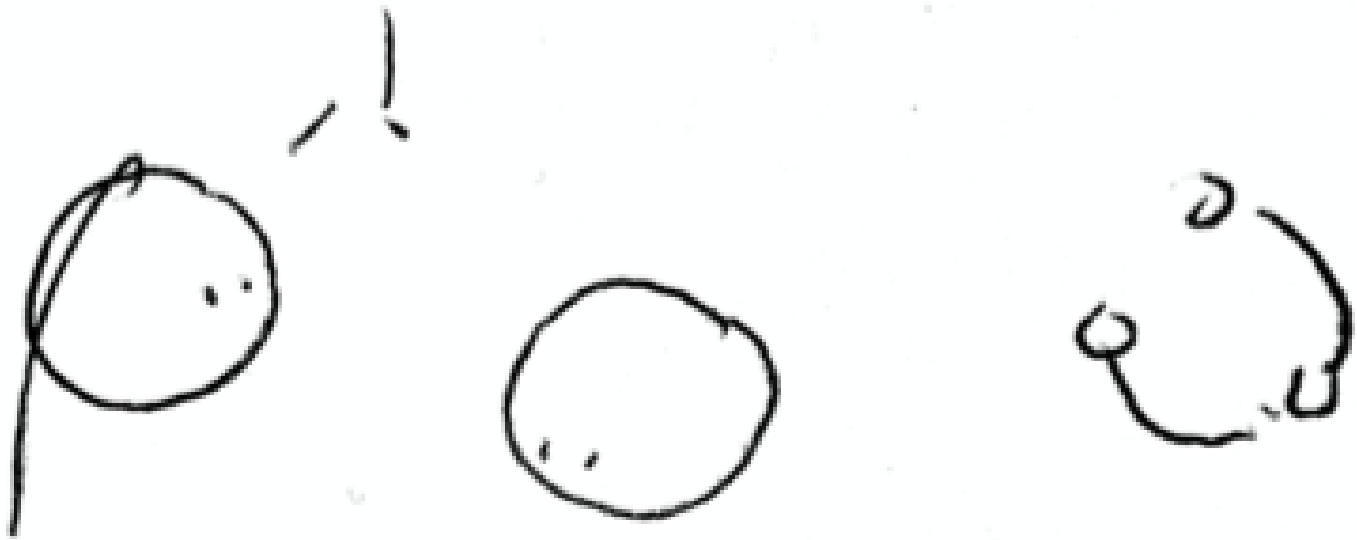
Circle of Interaction:

The smallest piece of meaningful interaction

The child is doing something



The adult responds to the child's behavior



The adult waits...

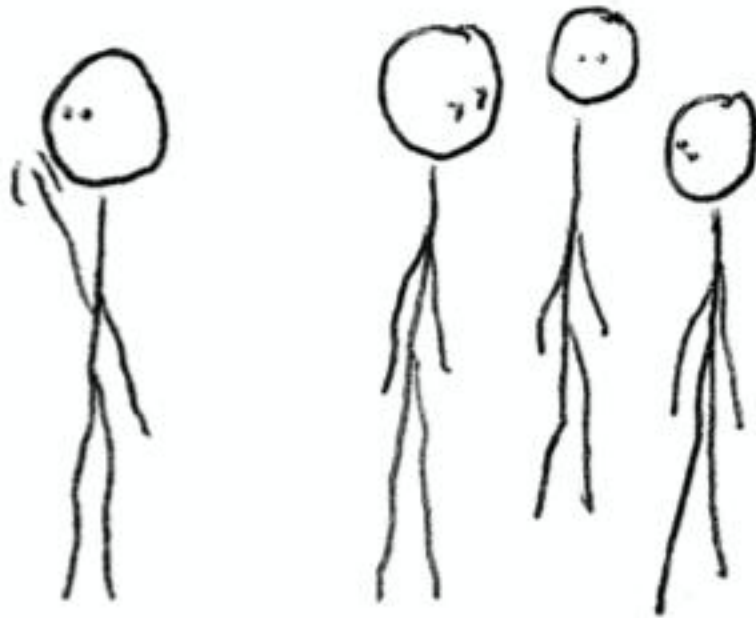


The child responds - closing the 'circle' and confirming that there is meaning to the interaction

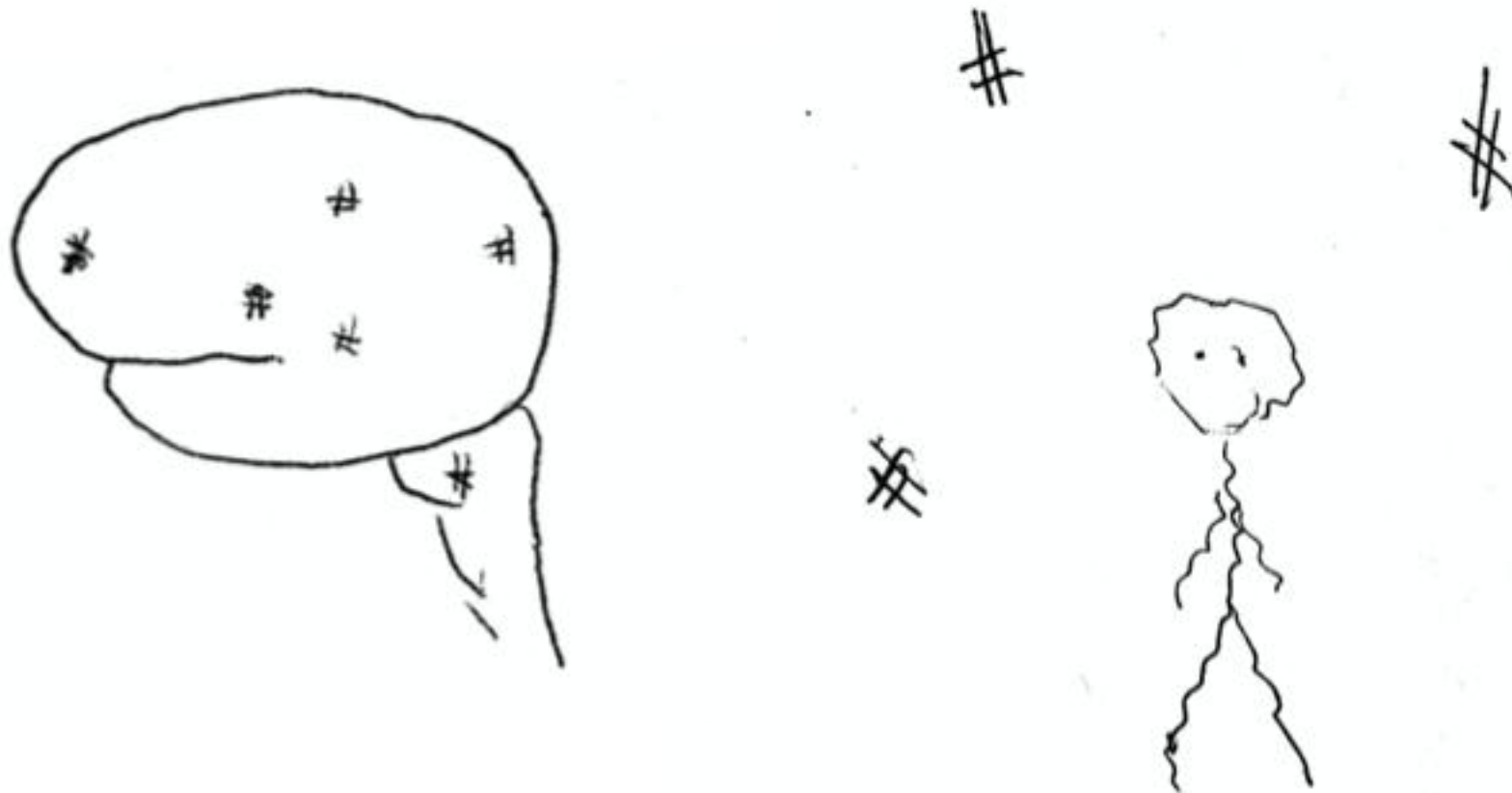


1980's – Now:

methods like these are studied and used
by people treating autism and developmental
disorders

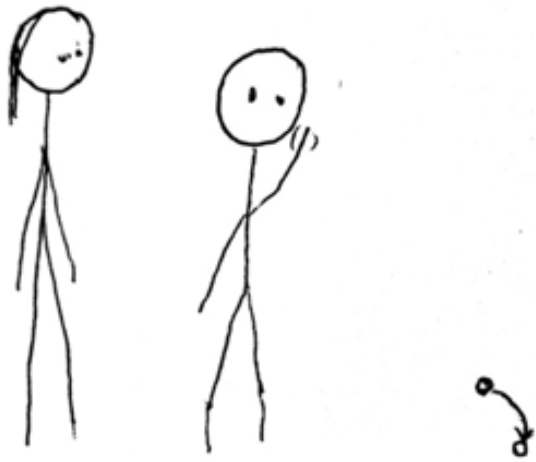


similarities between children with autism and with stress



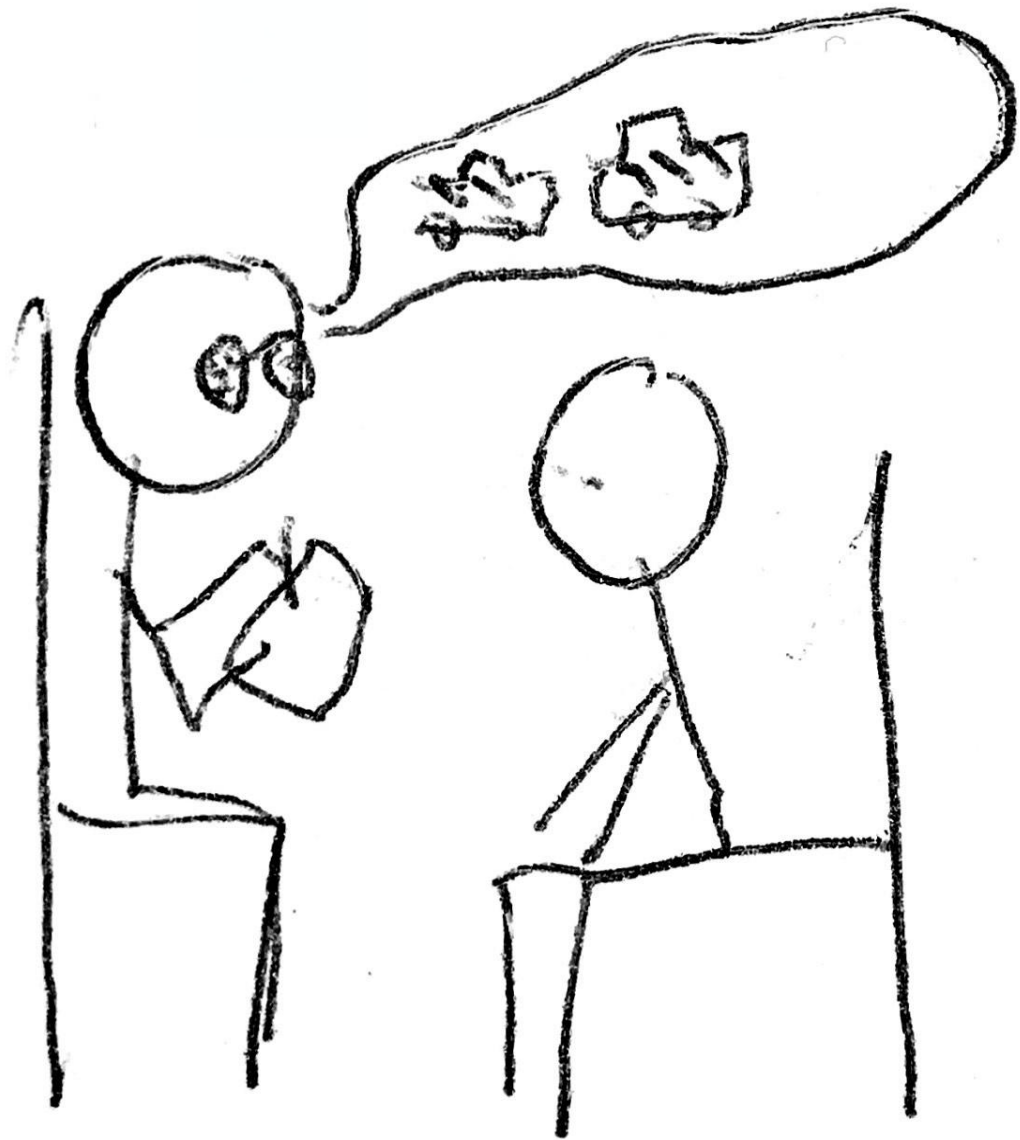


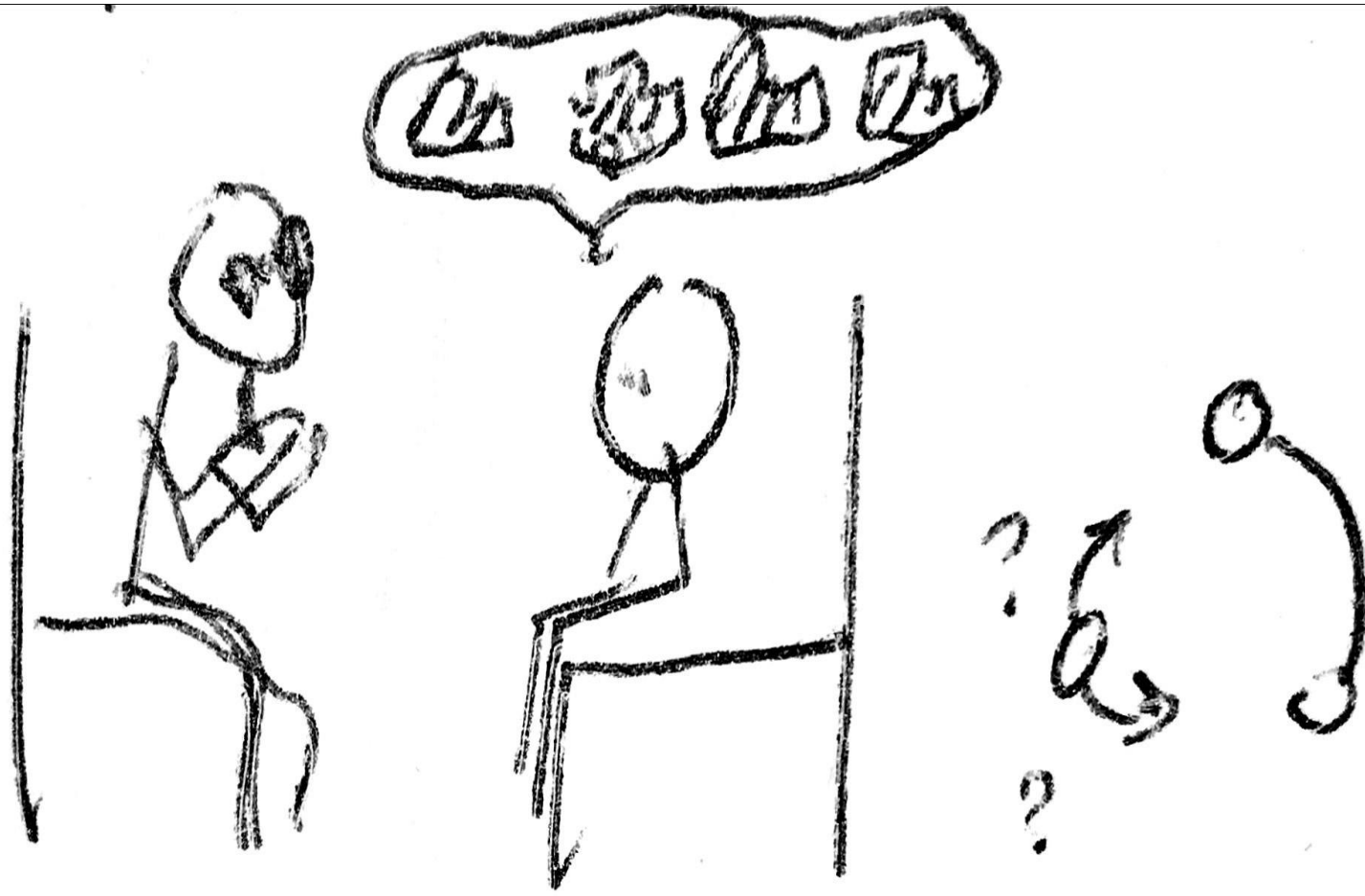
2. In the field of developmental disorders, the method developed and evolved.

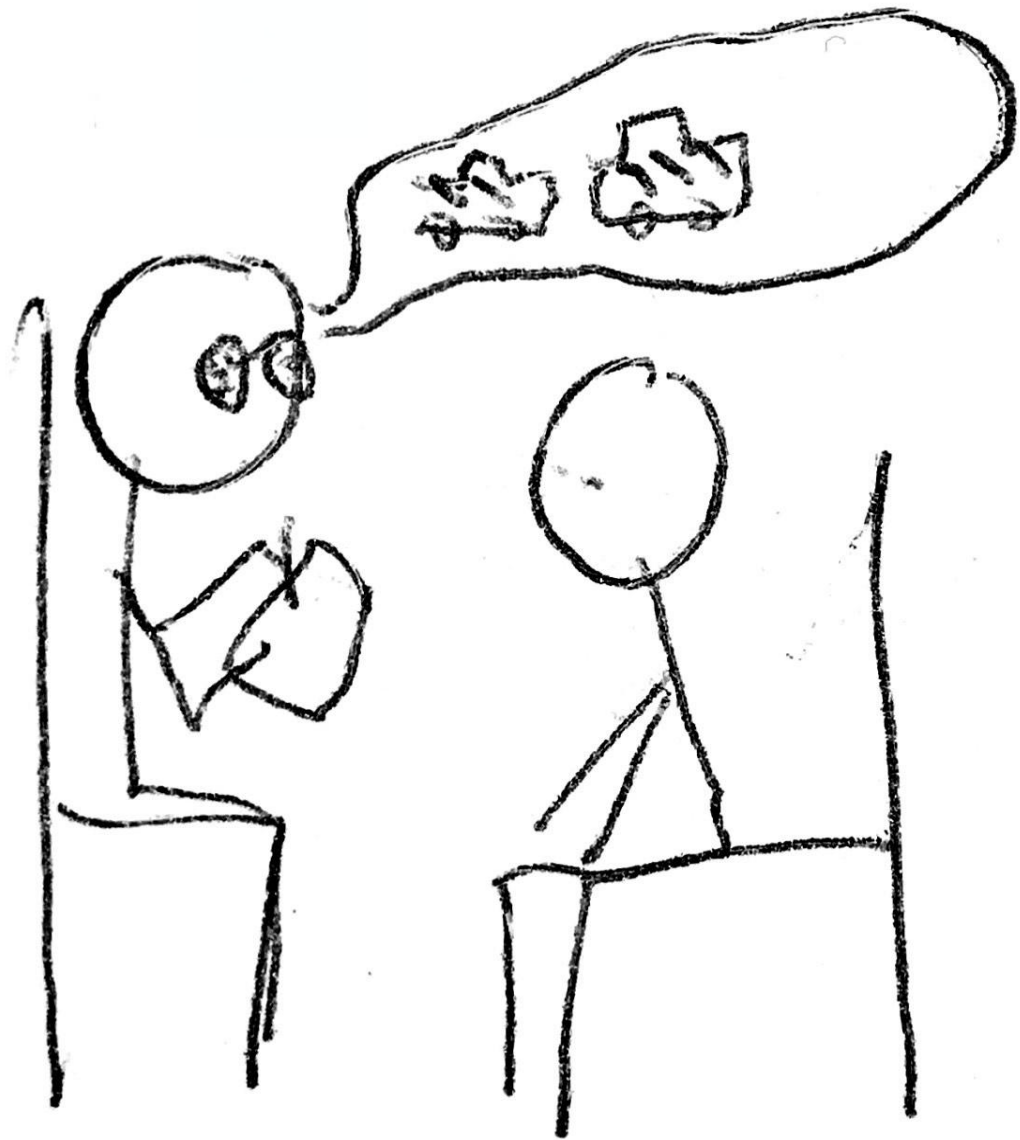


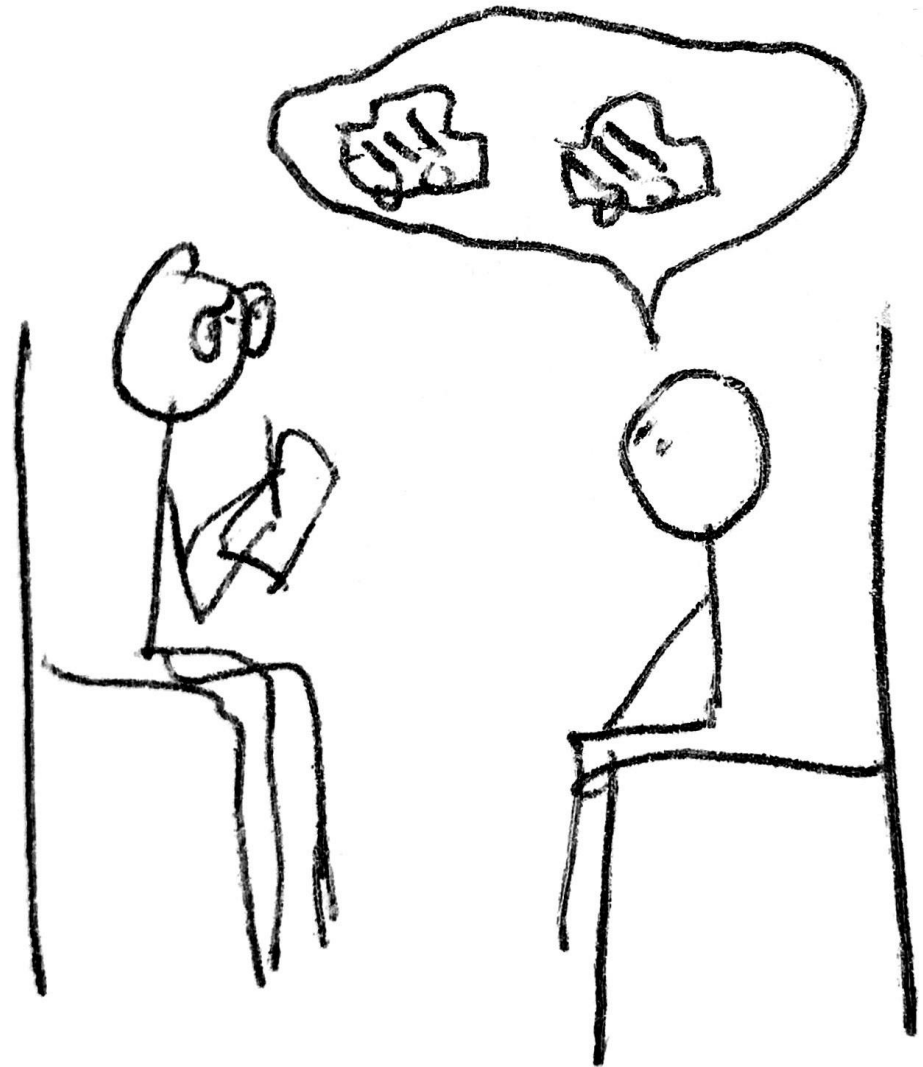












3. The method changes assessment and treatment of developmental disorders, particularly autism.

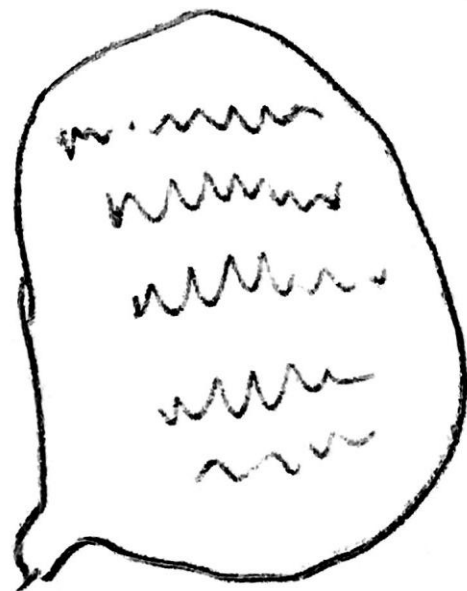
DSM-5 Diagnostic criteria Autism Spectrum Disorder

- A. Poor social communication**
- B. Narrow range of interests**
- C. Present since early childhood
- D. Poor function
- E. Not better explained by other disorders

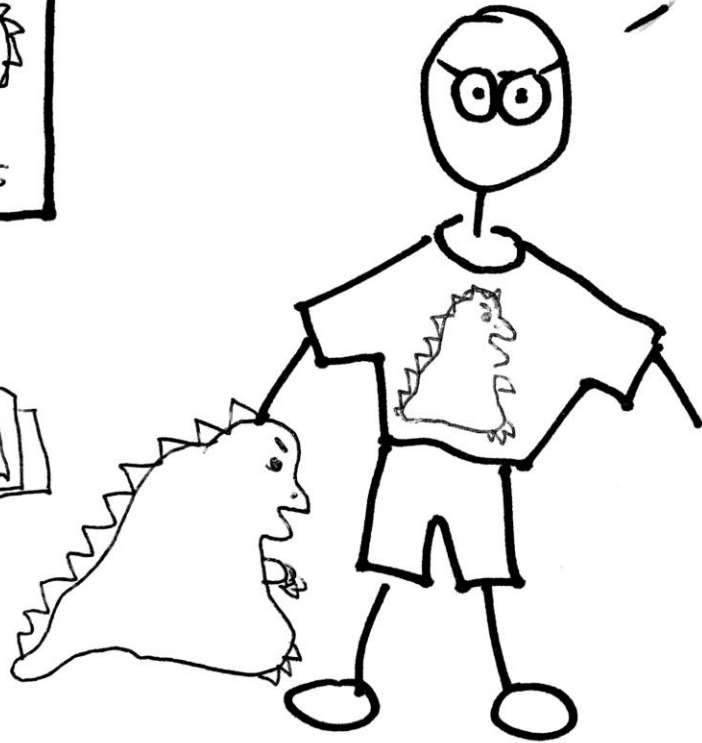
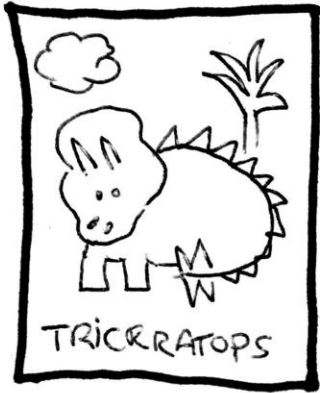
A



B

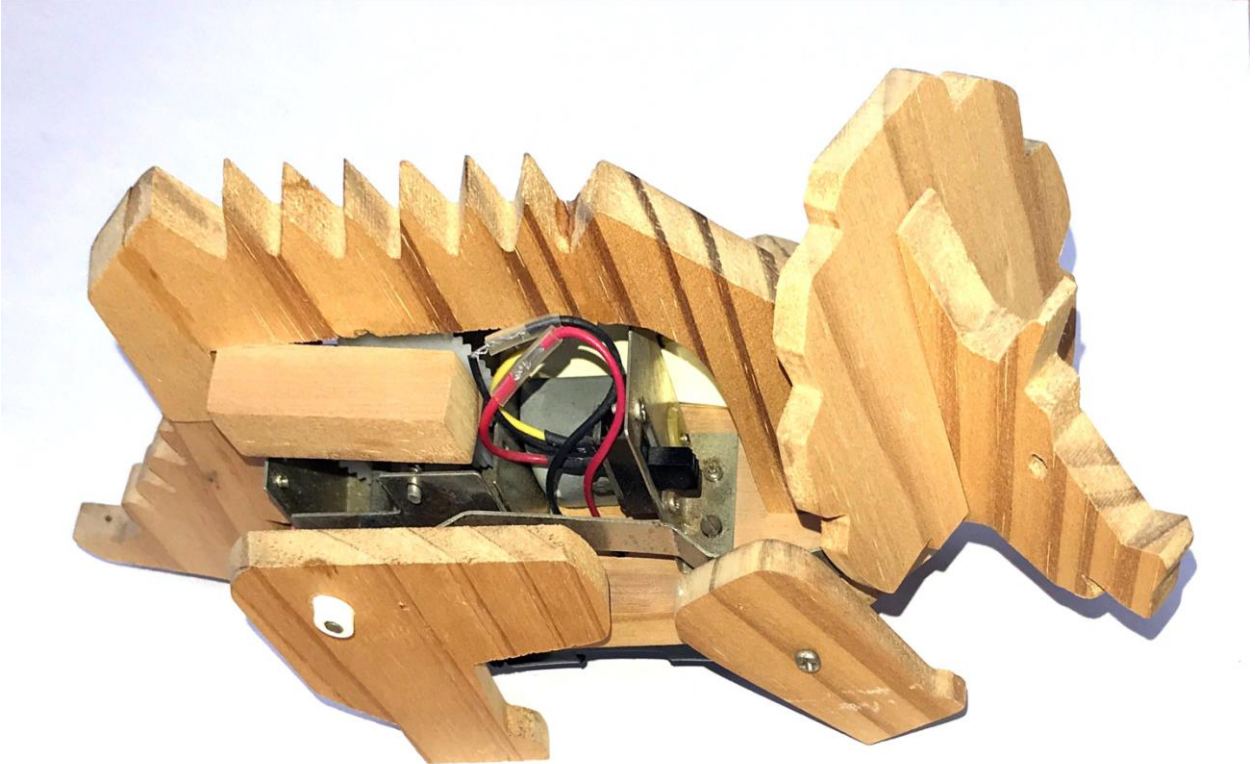


Narrow thinking...



Dinosaurs are a diverse group of animals of the clade Dinosauria that first appeared during the Triassic...

www.wikipedia.com



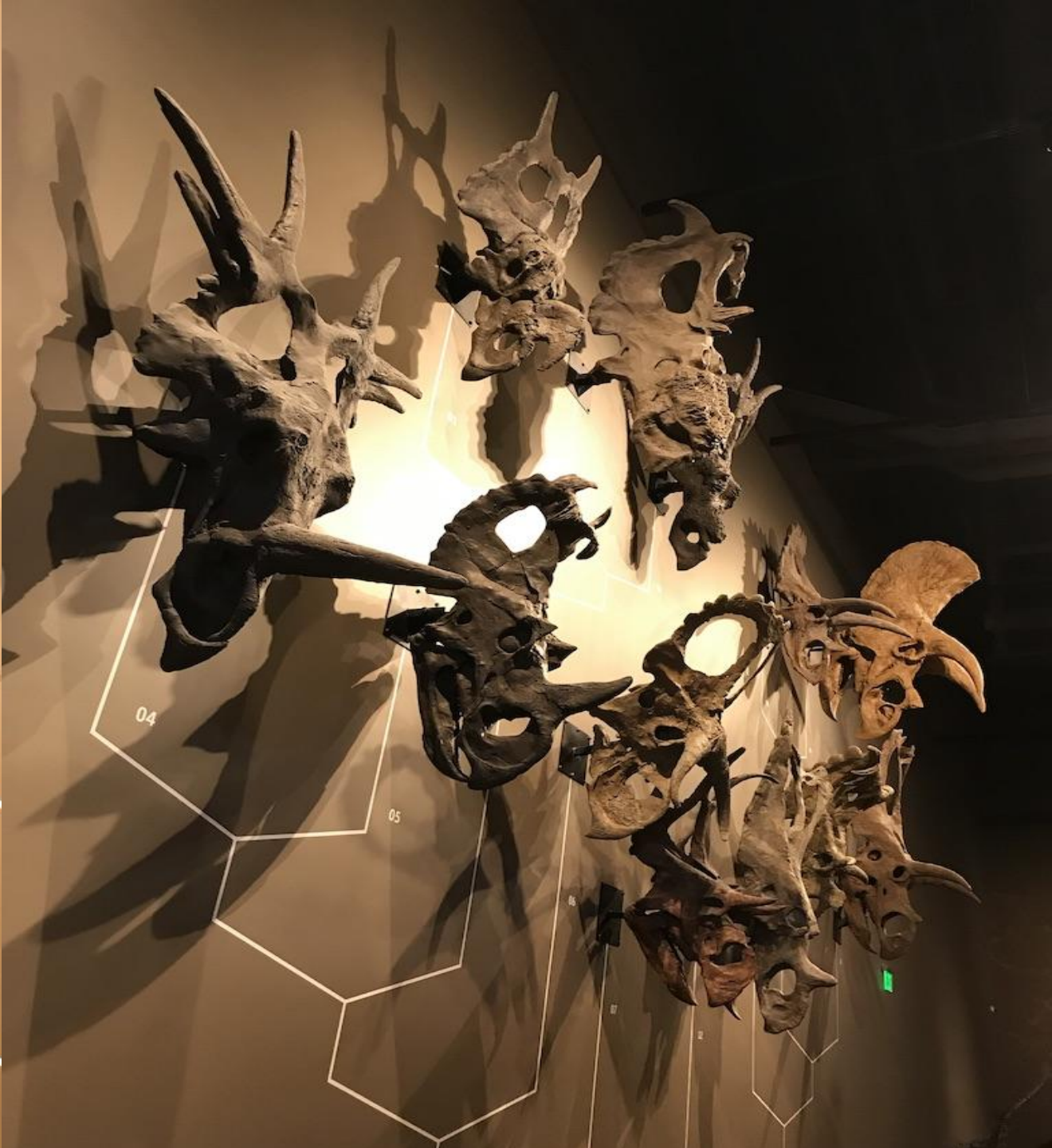
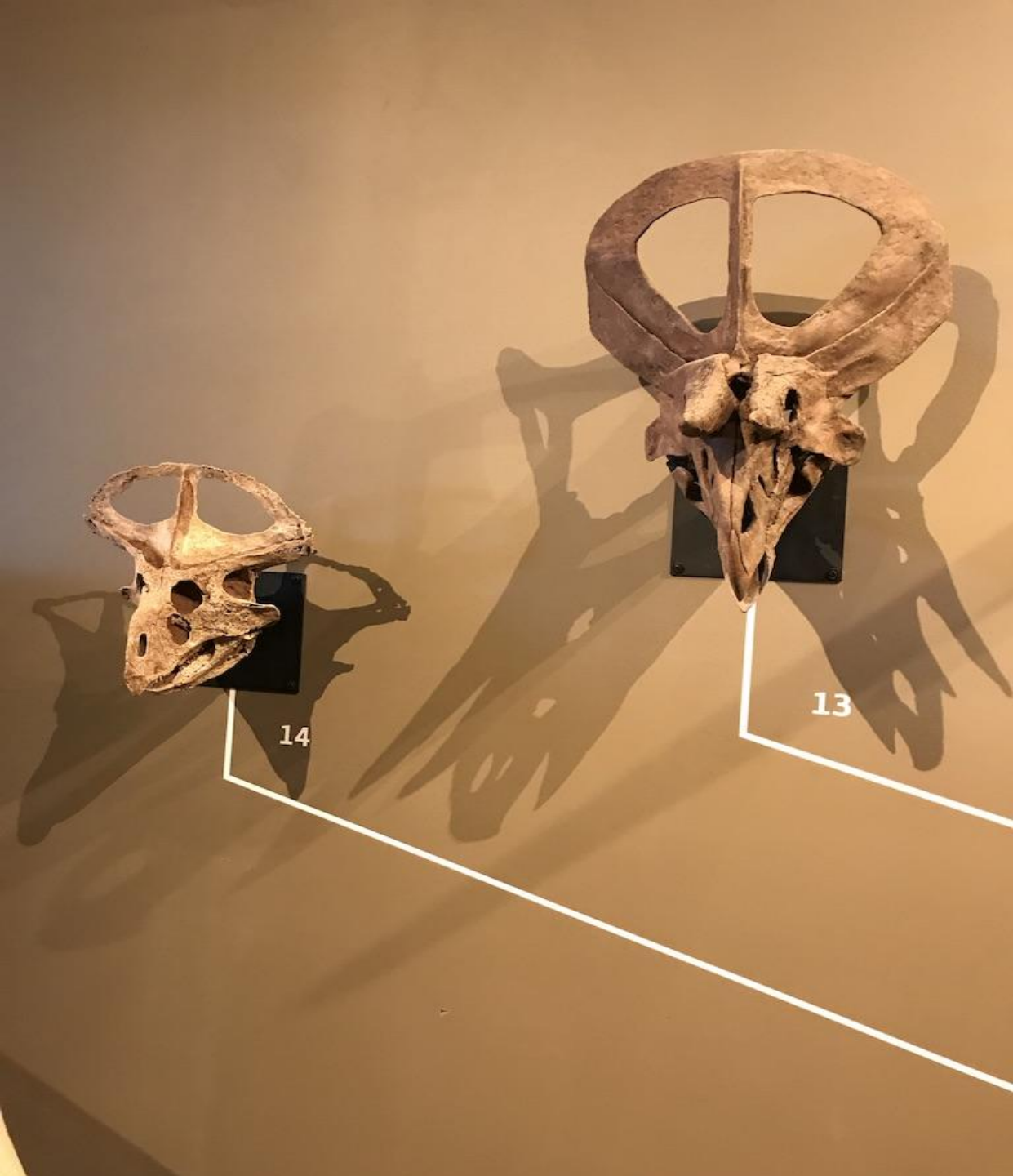








LATE JURASSIC



CENTROSAURS

01 *Einosaurus
procurvicornis*

CAST OF MOR 456 &
MOR 373



05 *Centrosaurus
apertus*

CAST OF AMNH 5239



02 *Pachyrhinosaurus
lakustai*

CAST OF TMP 1986.55.258



06 *Nasutoceratops
titusi*

CAST OF UMNH VP 16800



03 *Achelousaurus
horneri*

CAST OF MOR 845



07 *Diabloceratops
eatoni*

CAST OF UMNH VP 16699



04 *Styracosaurus
albertensis*

CAST OF CMN 344



CHASMOSAURS

08 *Anchiceratops
ornatus*

CAST OF NMC 8535



11 *Coahuilaceratops
magnacuerna*

CAST OF EPC 276



09 *Triceratops
horridus*

CAST OF TCM 2001.93.1



12 *Chasmosaurus
belli*

CAST OF ROM 843



10 *Kosmoceratops
richardsoni*

CAST OF UMNH VP 17000



BASAL CERATOPSIANS

13 *Zuniceratops
christopheri*

CAST OF MSM P 4185



14 *Protoceratops
andrewsi*

UMNH VPC 41



THE TRICERATOPS

The poster contains several educational elements:

- Geological Time Scale:** A vertical bar on the left showing the Cretaceous period in yellow and green, and the Tertiary period in blue.
- Triceratops Variants:** Four small illustrations at the top showing different views of the dinosaur's head and horns.
- Hand Diagrams:** Two diagrams on the right showing the skeletal structure of the dinosaur's hands, with labels like 'FIG. 1' and 'FIG. 2'.
- Skeleton:** A full-body skeletal drawing of a Triceratops on the right side.
- World Map:** A map at the bottom left showing the distribution of Triceratops in North America.
- Evolutionary Silhouettes:** A row of three black silhouettes at the bottom showing the evolution of the dinosaur's head and horns.
- Text:** Multiple columns of small text providing details about the dinosaur's anatomy, behavior, and classification.

12

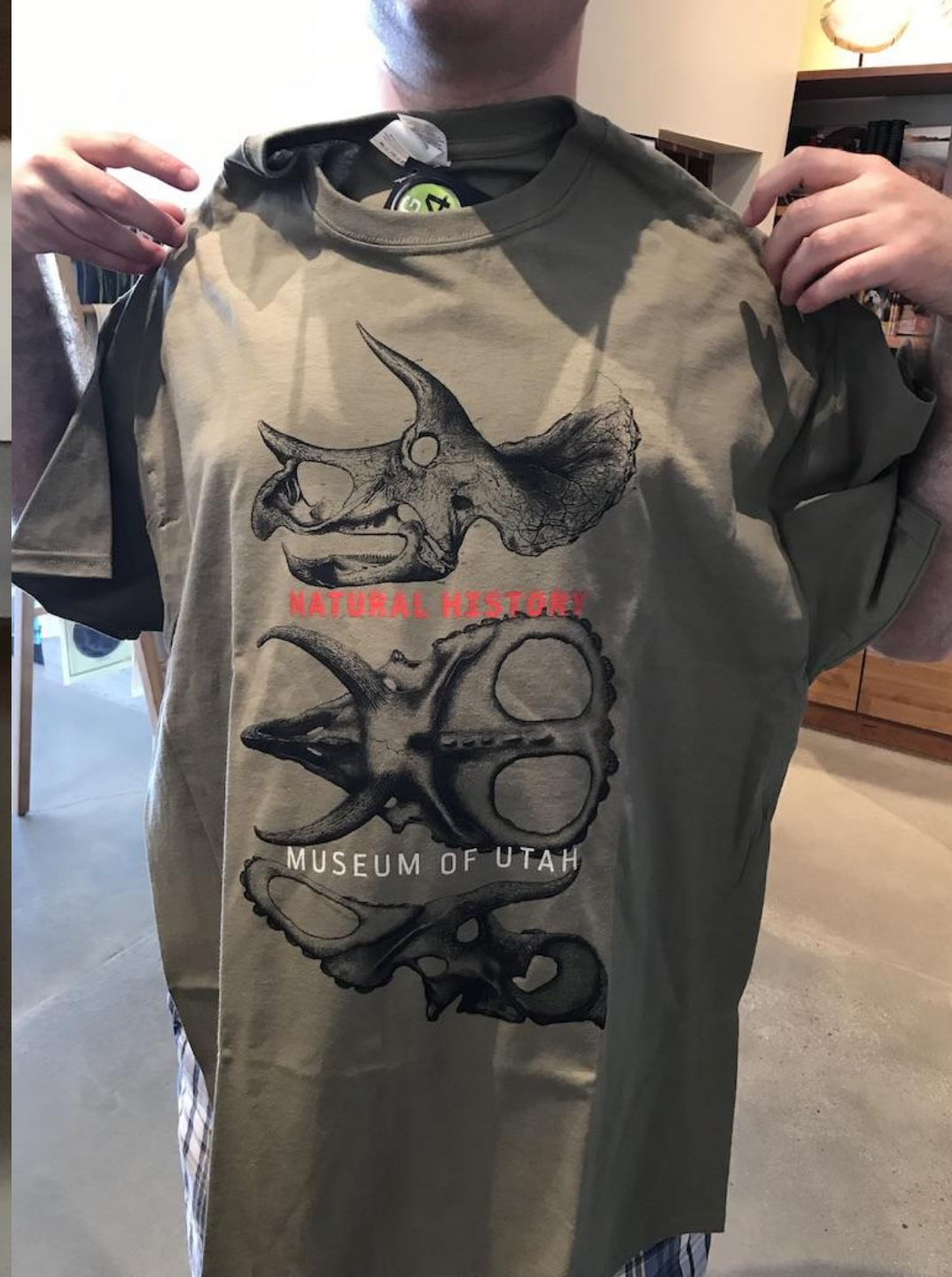
THE TRICERATOPS

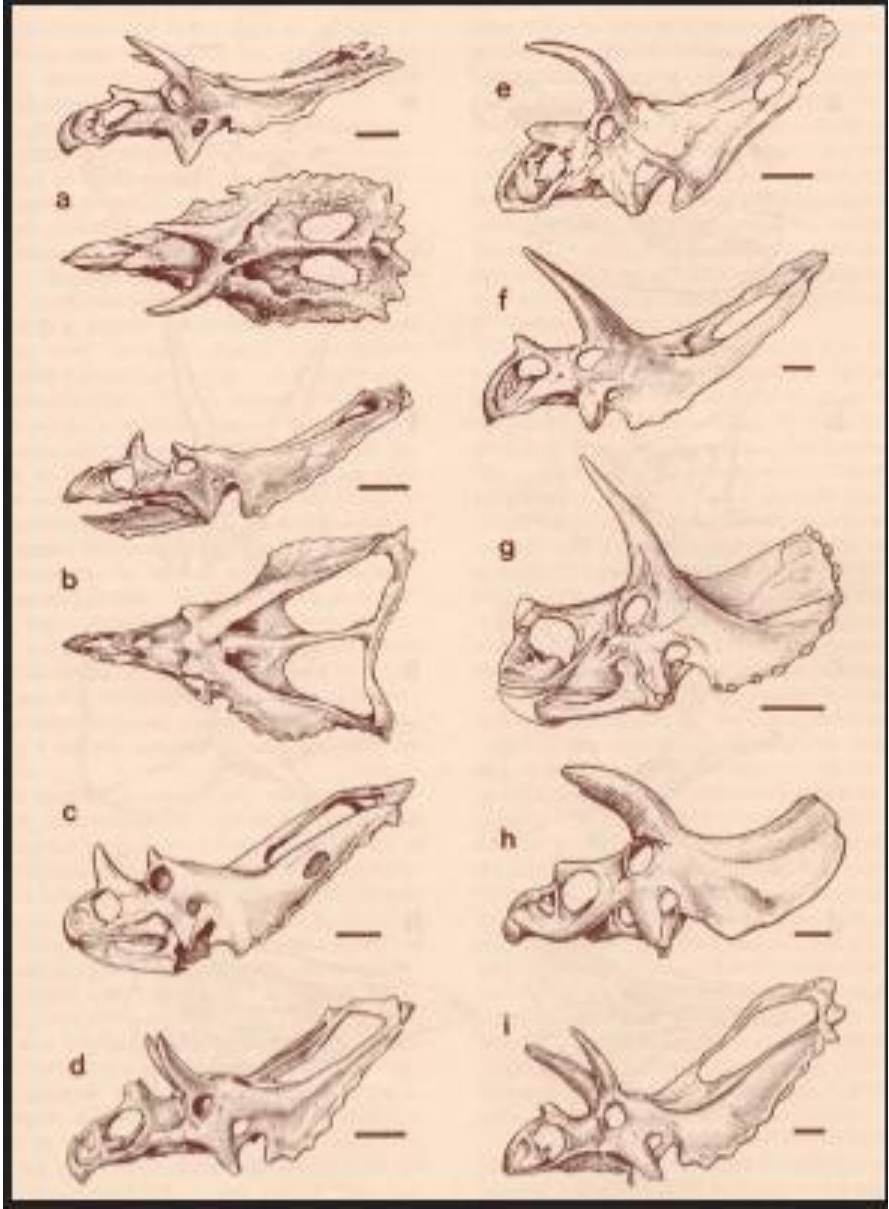
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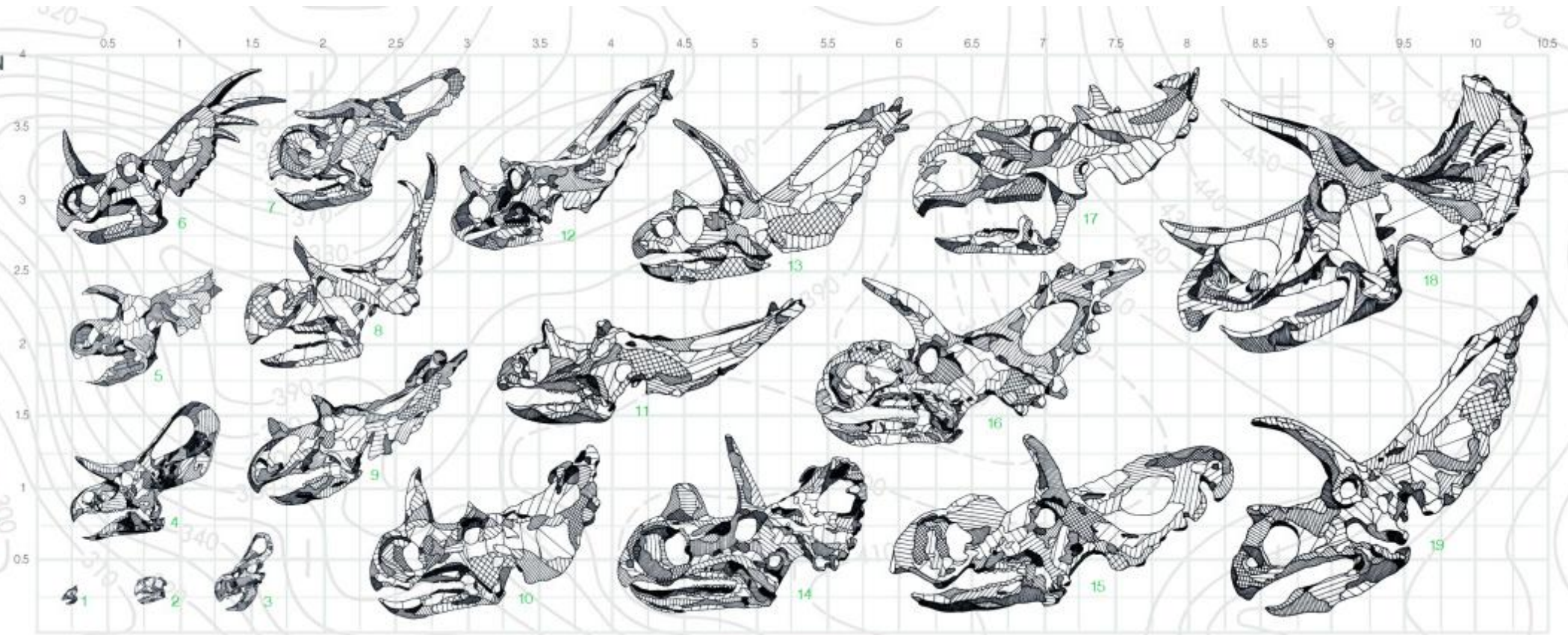
495

1





CERATOPSIDIAN
SKULL SIZE
CHART



1. ARCHHEOCERATOPS
2. PSITTACOSAURUS
3. PROTOCERATOPS
4. ZINCKERIATOPS
5. AVACERATOPS
6. STYRACOSAURUS
7. NASUTOCERATOPS
8. DIABLOCEATOPS
9. SPICLYPEUS
10. CENTROSAURUS
11. UTAHCERATOPS
12. CHASMOSAURUS
13. PENTACERATOPS
14. WENDICERATOPS
15. MEDUSA CERATOPS
16. XENCERATOPS
17. PACHYRHINOSAURUS
18. TRICERATOPS
19. BRAVOCERATOPS



🔍 ceratopsian skulls



Cr 5 Powerfu john nyde...

NCTSN Im...

Top 10 Cer...

Southwest...

Active and...

✕ ceratop...



Pinterest





🌐 High Plains Public Radio



Colorado Construction Crew | Uncovers Triceratops Skull | WDDR



🔍 ceratopsian skulls



Cl

5 Powerfu

john nyde...

NCTSN Im...

Top 10 Cer...

Southwest...

Active and...

✕ ceratop...



Alchetron





Wikipedia



Anchiceratops - Wikipedia



ceratopsian skulls



Cr 5 Powerfu john nyde...

NCTSN Im...

Top 10 Cer...

Southwest...

Active and...

x ceratop...



Wikipedia



Ceratopsia - Wikipedia





Ceratopsidae

1. *Psittacosaurus lamellosus*, 2. *Einiosaurus alcheringensis*, 3. *Pachyrhinosaurus lakota*, 4. *Pachyrhinosaurus penhryn*,
 5. *Pachyrhinosaurus canadensis*, 6. *Achelopeltosaurus harrisi*, 7. *Einiosaurus pennsylvanicus*, 8. *Mimiosaurus* sp.,
 9. *Ceratopsus bodminensis*, 10. *Styracosaurus huxleyi*, 11. *Styracosaurus albertensis*, 12. *Rubeosaurus ornatus*,
 13. *Ceratopsus sp.*, 14. *Spicospira strombergensis*, 15. *Achelousaurus* sp., 16. *Dakotaceratops natoli*, 17. *Achelousaurus stans*

Ceratopsidae

18. *Troocerasaurus lewisi*,
 19. *Zuniceratops chelonoides*,
Protoceratopsidae
 20. *Protoceratops andrewsi*,
 21. *Protoceratops richardsoni*

Leptoceratopsidae

22. *Leptoceratops curriei*,
 23. *Leptoceratops kooyulensis*,
Basal Neoceratopsidae
 24. *Neoceratops huerfanoensis*

Chasmosaurinae

25. *Archiceratops irroratus*, 26. *Cochiceratops magnicornis*, 27. *Archiceratops richardsoni*, 28. *Agrosaurus meloyensis*, 29. *Vigorsceratops richardsoni*,
 30. *Maceratops parvus*, 31. *Melanosceratops lucas*, 32. *Archiceratops brachyops*, 33. *Chasmosaurus belli*, 34. *Chasmosaurus russelli*, 35. *Paraceratops monilifer*,
 36. *Styracosaurus pectus*, 37. *Edmontaceratops arizonensis*, 38. *Styracosaurus horridus*, 39. "Horns of Texa", 40. *Juraceratops agilis*, 41. *Troocerasaurus carolinensis*,
 42. *Troocerasaurus* sp., 43. *Troocerasaurus* sp., 44. *Brachyceratops polyphemus*



Centrosaurines

1. *Xenoceratops fremontensis*
2. *Sinoceratops zhuchengensis*
3. *Pachyrhinosaurus lakotai*
4. *Pachyrhinosaurus peeblesorum*
5. *Pachyrhinosaurus canadensis*
6. *Achelousaurus hoveni*
7. *Einiosaurus prouronotus*
8. *Manducosaurus lewisi*
9. *Centrosaurus irroratus*
10. *Nasutoceratops ibexi*
11. *Styracosaurus albertensis*
12. *Rubeosaurus ovalis*
13. *Centrosaurus apertus*
14. *Spinops albertorum*
15. *Avaceratops taharaensis*
16. *Diabloceratops sathori*
17. *Abercromboceras healeyi*

Ceratopsoides

18. *Surooceratops laredobae*
19. *Zuniceratops chrysops*

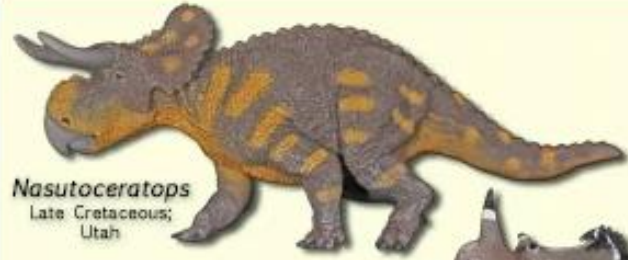
Protoceratopsidae

20. *Protoceratops andrewsi*
21. *Protoceratops hellenikensis*

Chasmosaurines

22. *Anchiceratops ornatus*
23. *Cochlosceratops magnirostris*
24. *Kosmoceratops richardsoni*
25. *Agaceratops mansuetor*
26. *Vagaceratops julesburgensis*
27. *Mioceratops perakensis*
28. *Melusaceratops fiki*
29. *Anchiceratops brachyops*
30. *Chasmosaurus belli*
31. *Chasmosaurus russelli*
32. *Pentaceratops alberti*
33. *Utahceratops gettyi*
34. *Einiosceratops eximius*
35. *Troceratops horni*
36. "Yoshi's Trick"
37. *Audiceratops ligus*
38. *Elanoceratops curranii*
39. *Triceratops prius*
40. *Troceratops labus*
41. *Breviceratops polyphemus*





Nasutoceratops
Late Cretaceous;
Utah



Styracosaurus
Late Cretaceous;
W. North America



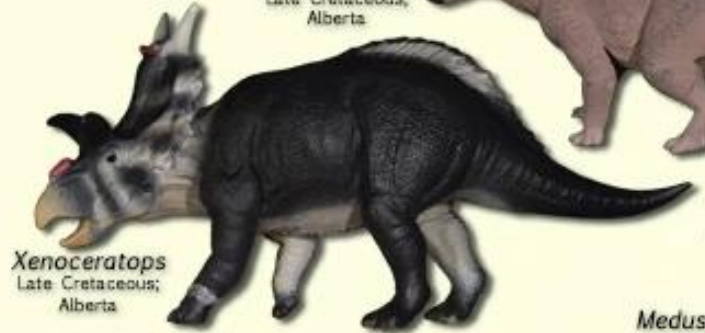
Diabloceratops
Late Cretaceous;
Utah

Achelousaurus
Late Cretaceous;
W. North America



Coronosaurus
Late Cretaceous;
Alberta

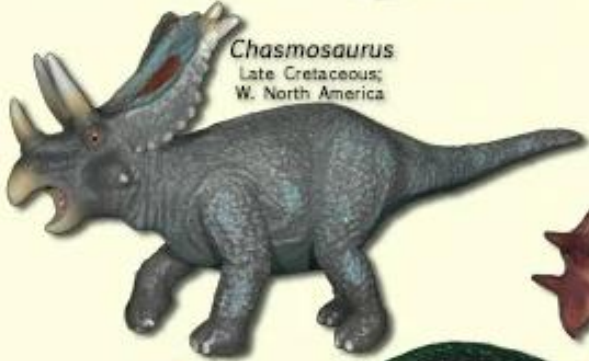
Pachyrhinosaurus
Late Cretaceous;
W. North America



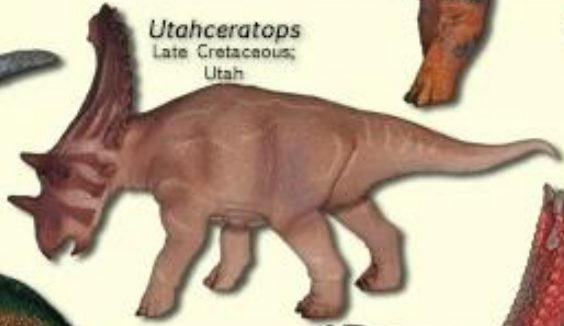
Xenoceratops
Late Cretaceous;
Alberta



Medusaceratops
Late Cretaceous;
Montana



Chasmosaurus
Late Cretaceous;
W. North America



Utahceratops
Late Cretaceous;
Utah



Vegaceratops
Late Cretaceous;
Alberta



Kosmoceratops
Late Cretaceous;
Utah



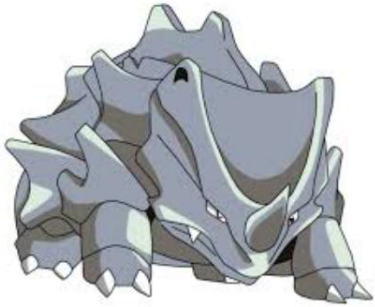
Triceratops
Late Cretaceous;
W. North America



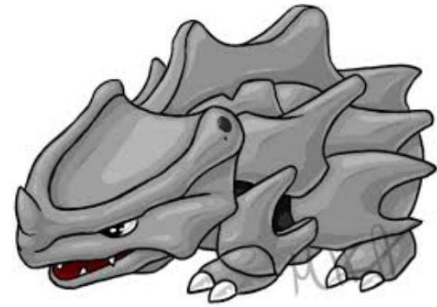
Pentaceratops
Late Cretaceous;
W. North America



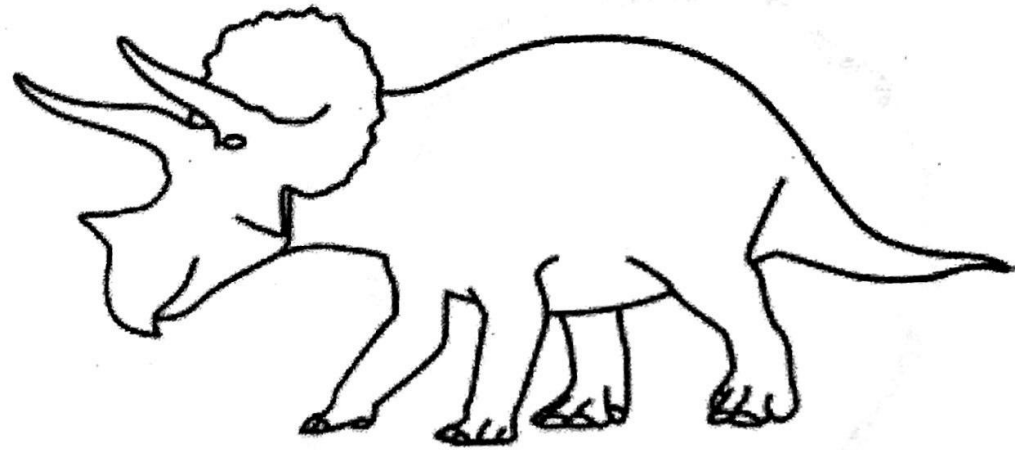
Torosaurus
Late Cretaceous;
W. North America



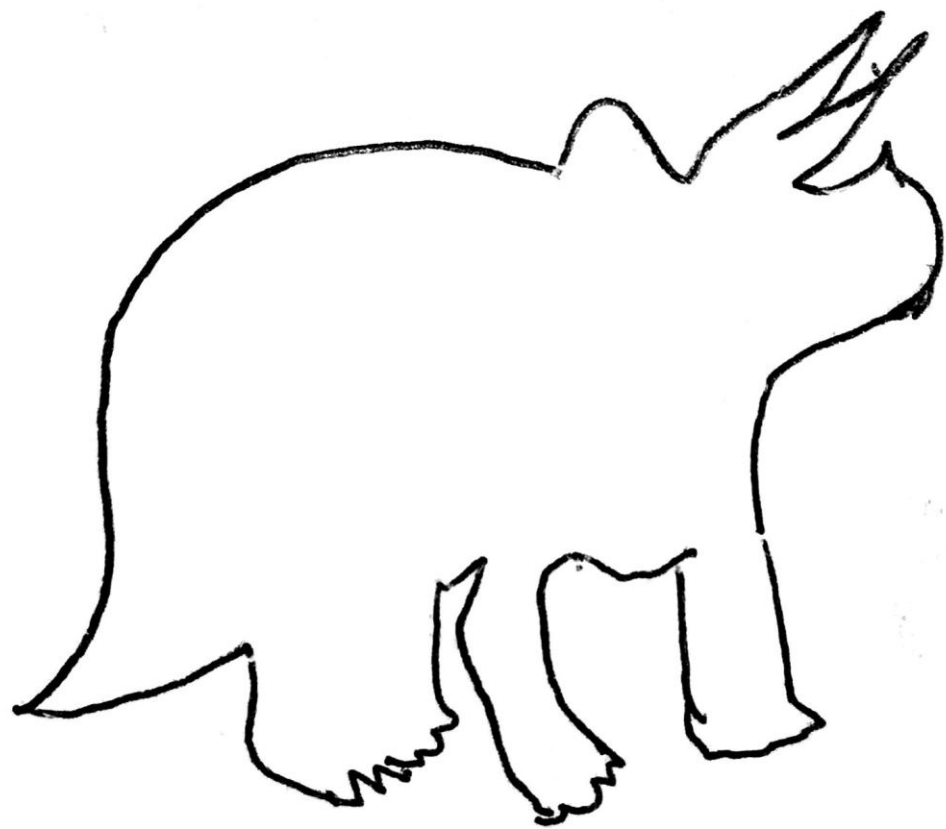
RHYHORN

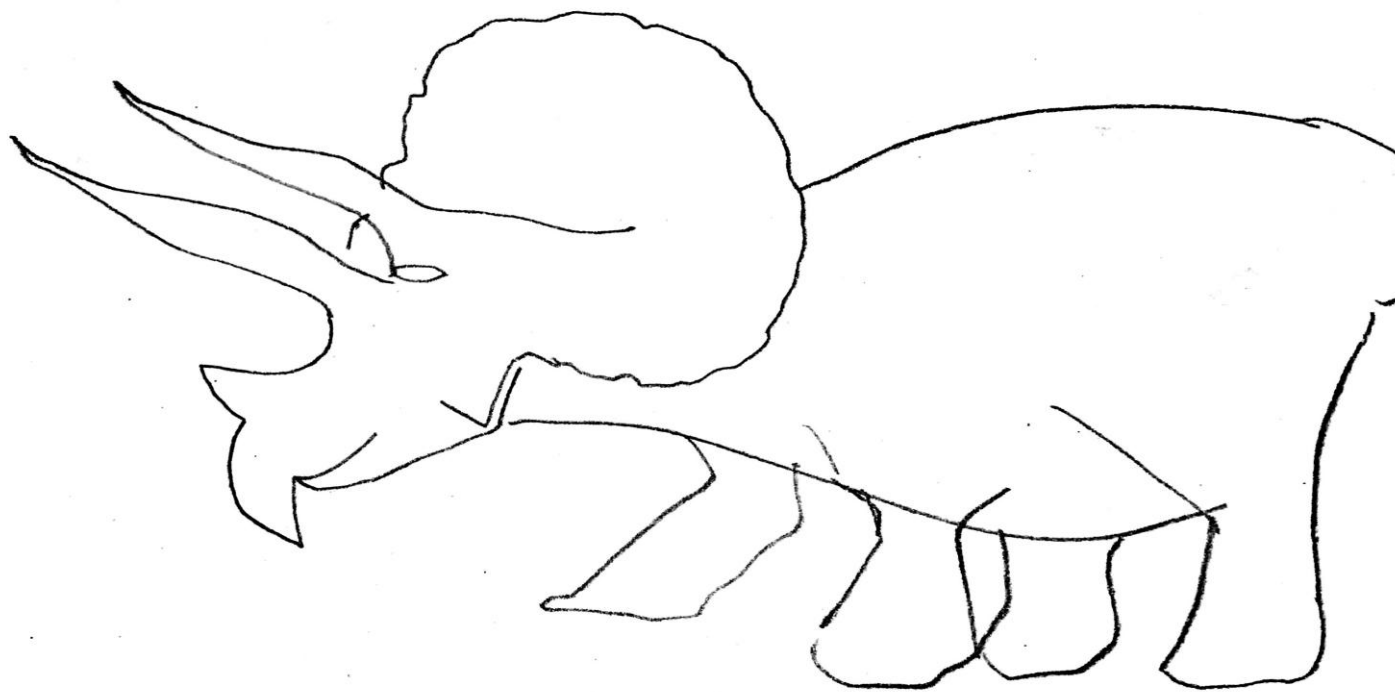


How to Draw a Triceratops



WeDrawAnimals.Com







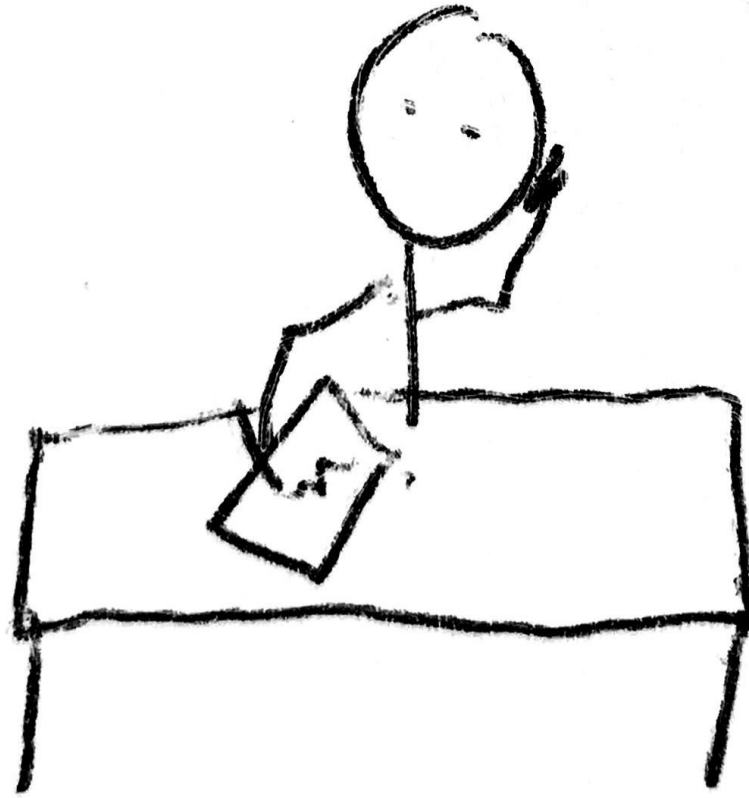




GAME OF
THRONES
THE TOURING
EXHIBITION

Assessment

- History and Mental Status Examination
- Physical examination with neurological screening
- Speech and language Assessment
- Occupational therapy assessment, including sensory and motor processing
- **Collateral data – family, teachers, others, records, video**
- Longitudinal observation – many appointments might be needed



More Assessment

- Lab testing e.g. Chromosomal Microarray (FRAXXA, Tuberous Sclerosis, Q22, Prader Willi etc.)



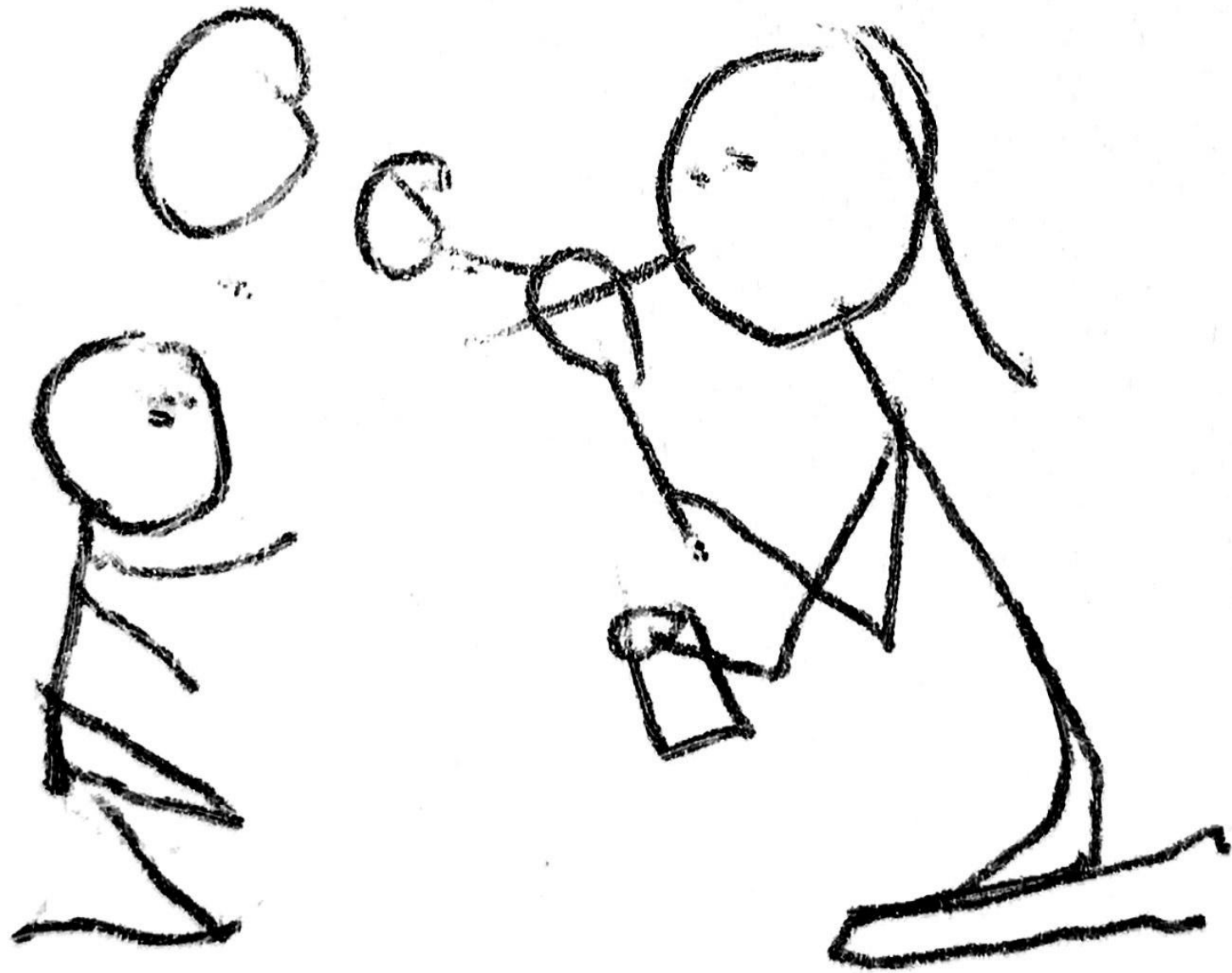
- Maybe EEG (sometimes 24 hour, video) , less likely MRI



- IQ testing – often inaccurate especially due to reliance on language. Might use non-verbal IQ testing e.g. Leiter IQ.
- Autism specific assessments – *behavioral focus*
- Measures of regulation and social connection – *person focus*

Autism Diagnostic Observation Scale (ADOS-2)

- Most commonly cited test
- Measures communication, social interaction, and restricted range of interests
- 4 Modules: non-verbal, minimally verbal, verbal, conversational
- Requires formal training to use accurately
- Resources for training in Nablus
- Kindness during testing may make the child seem better
- **Accurate in research settings but less reliable in clinical settings**



Article in Press

Overemphasis of the Autism Diagnostic Observation Schedule (ADOS) Evaluation Subverts a Clinician's Ability to Provide Access to Autism Services

[McLeod F. Gwynette](#), MD^a, [Kelly McGuire](#), MD, MPA^c, [Matthew C. Fadus](#), MD^a,  , [Joshua D. Feder](#), MD^d, [Kathleen A. Koth](#), DO^b, [Bryan H. King](#), MD, MBA^e

 PlumX Metrics

DOI: <https://doi.org/10.1016/j.jaac.2019.07.933>

 Article Info

Abstract

Full Text

References

A concerning trend has emerged in the diagnosis and treatment of autism spectrum disorder (ASD) that has a negative impact on care. Quite often, a clinician's diagnosis of ASD using *DSM-5* criteria is no longer sufficient for individuals with ASD to access services. Insurance companies, school districts, and developmental disability agencies commonly require an Autism Diagnostic Observation Schedule (ADOS) to be eligible for services.

Child Autism Rating Scale (CARS-2)

- Easy to administer observation scale
- Less need for formal training
- Scales for IQ over and under 70
- Often used in research too

Other Autism Specific Assessments

- Autism Diagnostic Interview (ADI)
- Gilliam Autism Rating Scale

Changing assessment....

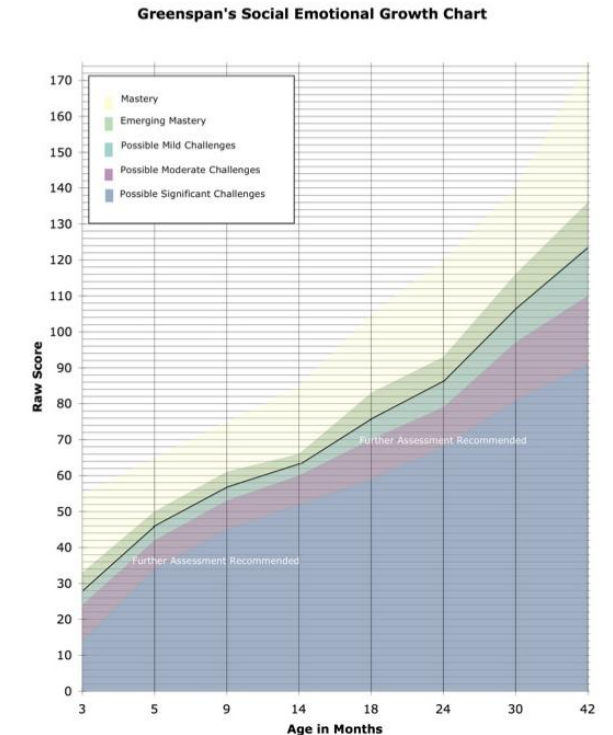


Measures of regulation and social connectedness:

- Regulation
- Connection
- Social reciprocity
- Individual differences (sensory, motor, executive function, etc.)
- Relationships (parent and child together)

Social Emotional Growth Chart (SEGC)

- Part of Bayley Scales in 2004
- Easy to administer
- Ages 0-6 but useful at older ages
- Meant for screening but useful for follow up
- We are developing an Arabic version to be tested here!



Age	Stage	Description
0-3	Stage 1	Exhibits growing self-regulation and interest in the world
4-5	Stage 2	Engages in relationships
6-9	Stage 3	Uses emotions in an interactive personal manner
10-14	Stage 4a	Uses a series of interactive emotional signals or gestures to communicate
15-18	Stage 4b	Uses a series of interactive emotional signals or gestures to problem solve
19-24	Stage 5a	Uses symbols or ideas to convey intentions or feelings
25-30	Stage 5b	Uses symbols or ideas to express more than basic needs
31-42	Stage 6	Creates logical bridges between emotions and ideas

Functional Emotional Assessment Scale (FEAS)

- Sensory, motor, and symbolic toys
- Child and parent play together
- Clinical and research versions

Fielding Connection Coding Paradigm (FCCP)

- Video coding in natural environments: home, school, clinic
- Useful for research
- Looks at amount of time connected and degree of connection
- Connection Coder mobile app

Back

2018-07-30_22:24:52.mp4



02:28 / 05:00


0.0 sec



Participant Menu

Start



Save 



Treatment:

- Autism specific interventions
- Speech and language therapy
- Occupational therapy
- Educational planning
- Etc. etc. etc.
- Medications for better regulation, and for specific conditions such as seizures

CARLAT PUBLISHING

Child Medication Fact Book *for* Psychiatric Practice



"Practical, thorough, and easy to use—a must for all prescribers!"

—FRED R. VOLKMAR, MD

Child Study Center, Yale University School of Medicine

JOSHUA FEDER, MD
ELIZABETH TIEN, MD
TALIA PUZANTIAN, PHARM.D, BCPP

Common autism specific treatment (ABA)

Deficit based – ‘Disorder’

(Like an infection or cancer)

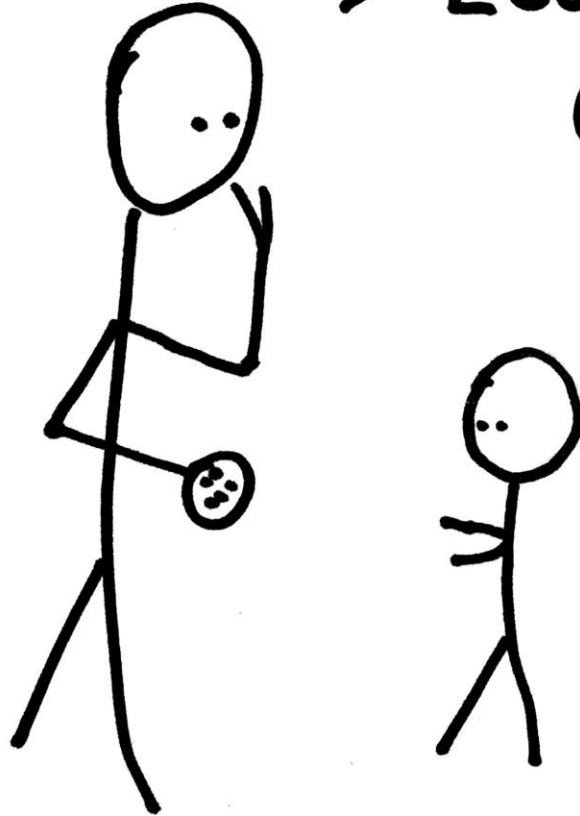
Directive: train to look ‘normal’

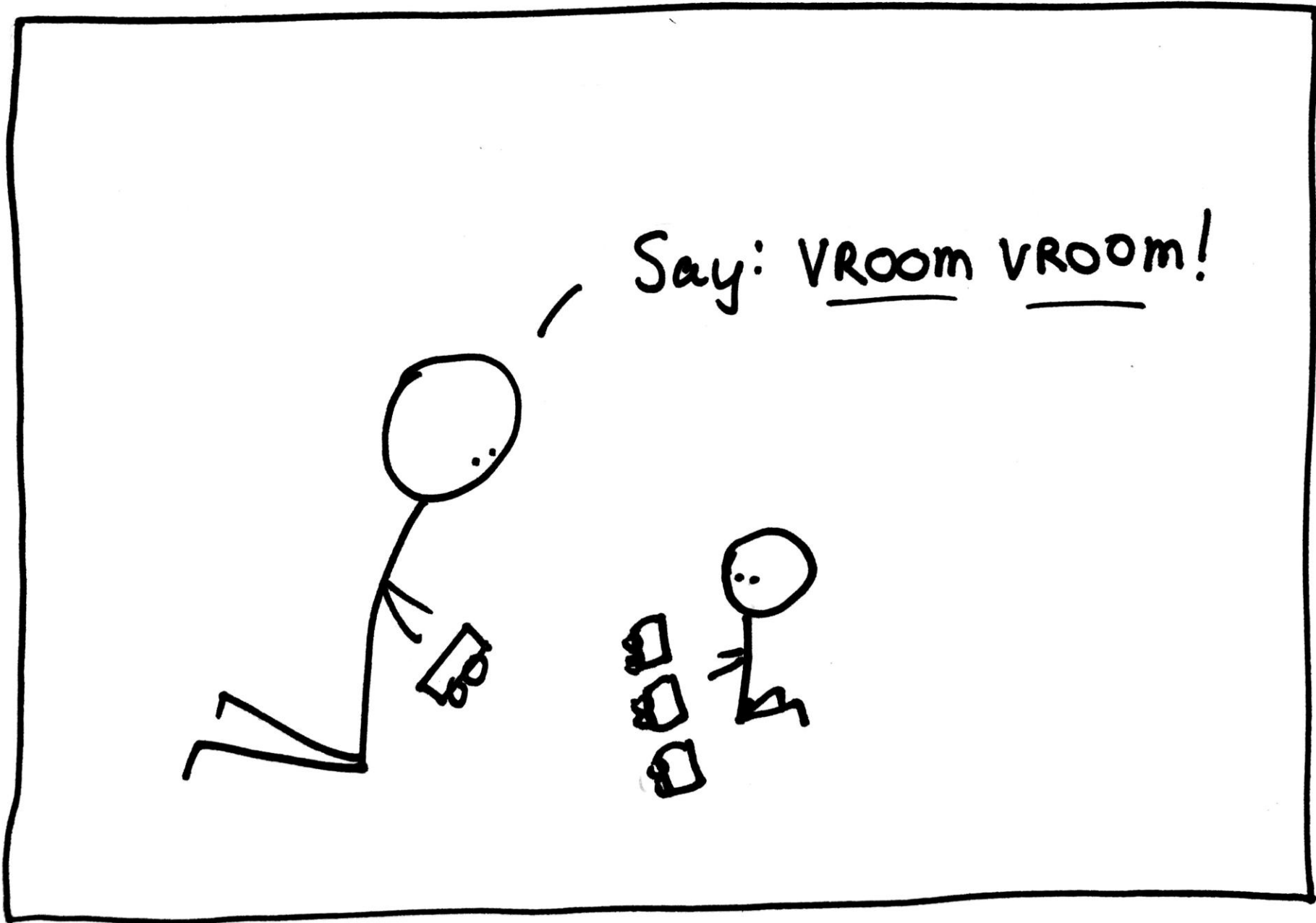
Train to "normal"?

/ Look at me.

Good job!

Here's your
cookie.

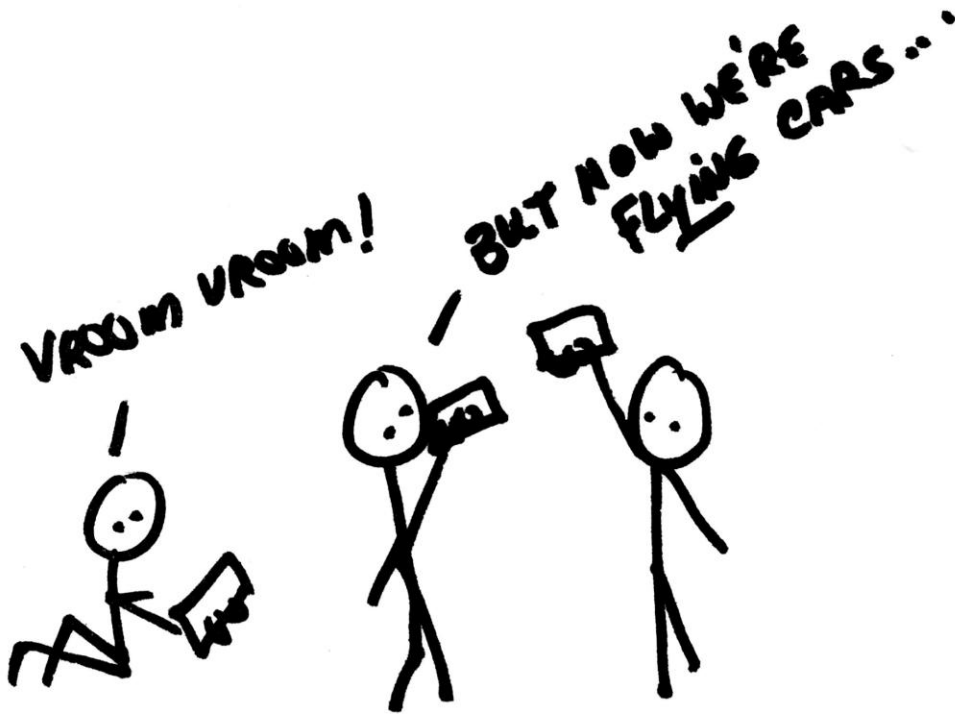
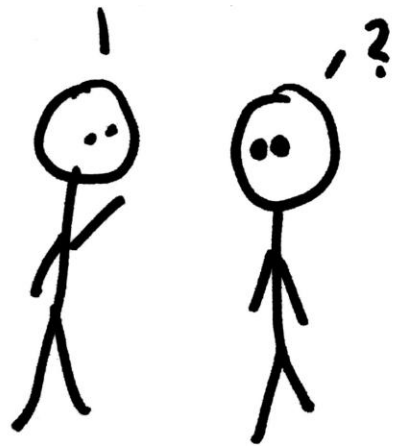




Say: VROOM VROOM!

But there are side effects...

QUIT staring
- it's weird.



Say... hel-LO!

Say... please

Say... thank you.

Say... good-bye 🎵



"..... say... hel-LO!"

Changing treatment (Developmental)

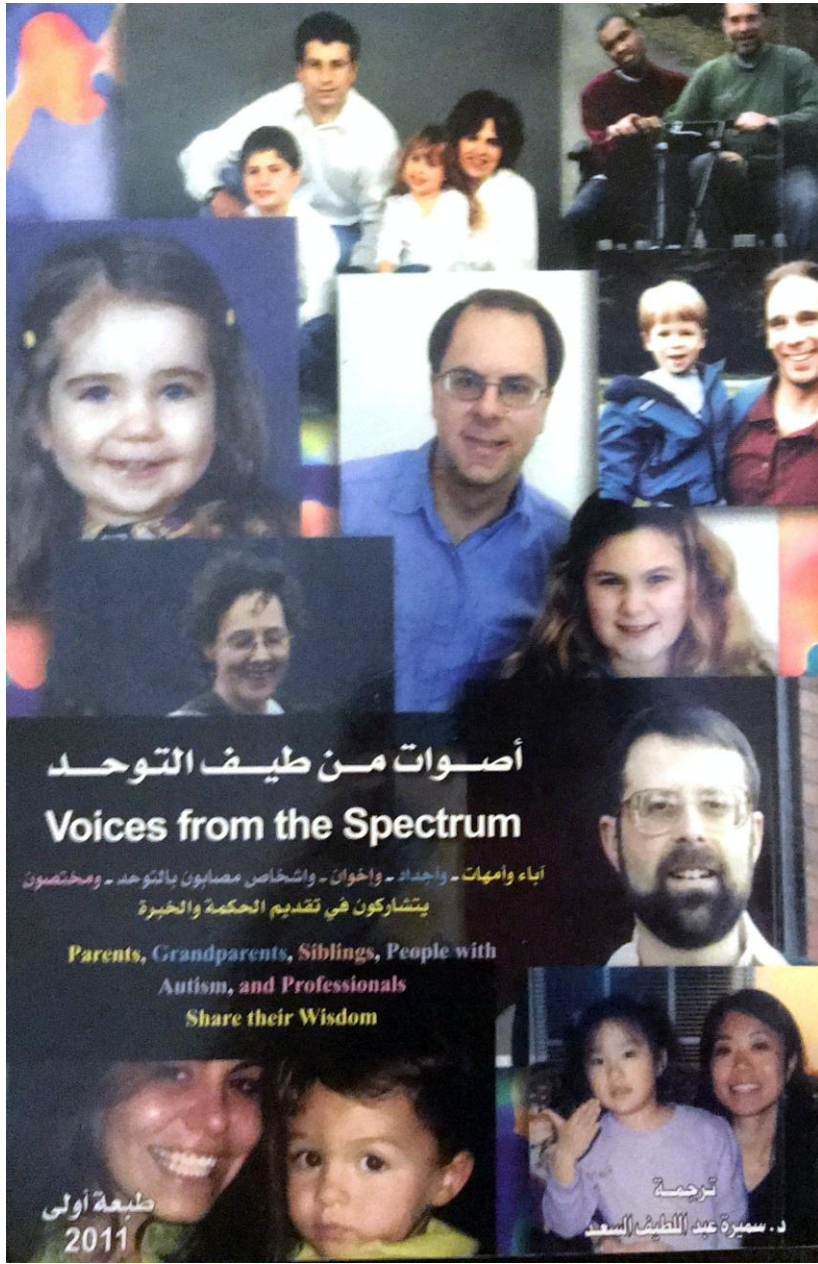
Regulation – Connection – Flow of Interaction

Less directive – build on strengths.

Individual differences: sensory, motor, executive...

Relationship based - parents, peers, teachers....

Honors the voices of child and family



أصوات من طيف التوحد

Voices from the Spectrum

آباء وامهات - واجداد - وإخوان - وأشخاص مصابون بالتوحد - ومختصون
يتشاركون في تقديم الحكمة والخبرة

Parents, Grandparents, Siblings, People with
Autism, and Professionals
Share their Wisdom

طبعة أولى
2011

ترجمة
د. سميرة عبد المنعم السعيد

2 ways to calm people:

1. Stay calm, present & patient



2. Share the concern



And think about the many reasons for the upset

We do not ignore an upset child.

And we do not punish an upset child

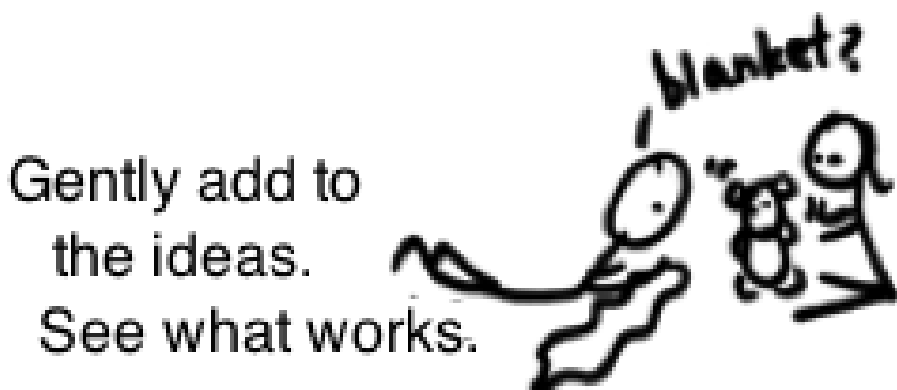
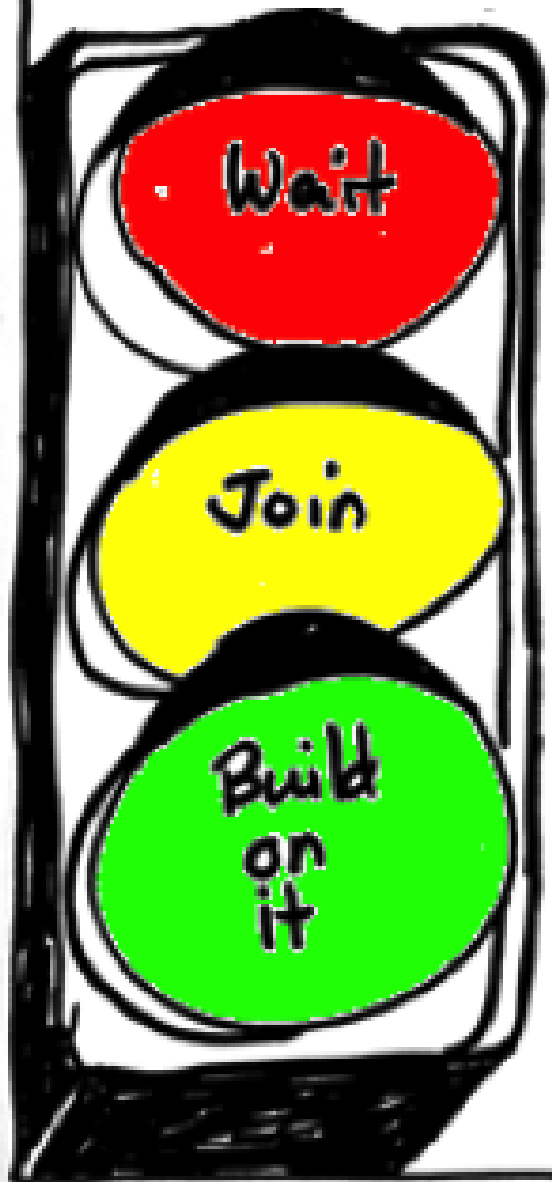
When child is calmer, make more circles



Build a flow of circles.

The flow helps the child communicate, learn and problem solve.

How to Connect in Meaningful Interaction?



Gentle Persistence pays off!

Range of treatments, from directive to non-directive

- Discrete Trial Training (Traditional Applied behavioral Analysis)
 - Pivotal Response Training
- Relationship Development Intervention
 - Early Start Denver Model
 - JASPER

Project ImPACT

- MEHRIT
- PLAY Project
- DIR/Floortime
 - Son Rise

Project ImPACT for Toddlers: Pilot outcomes of a community adaptation of an intervention for autism risk

Autism

1–16

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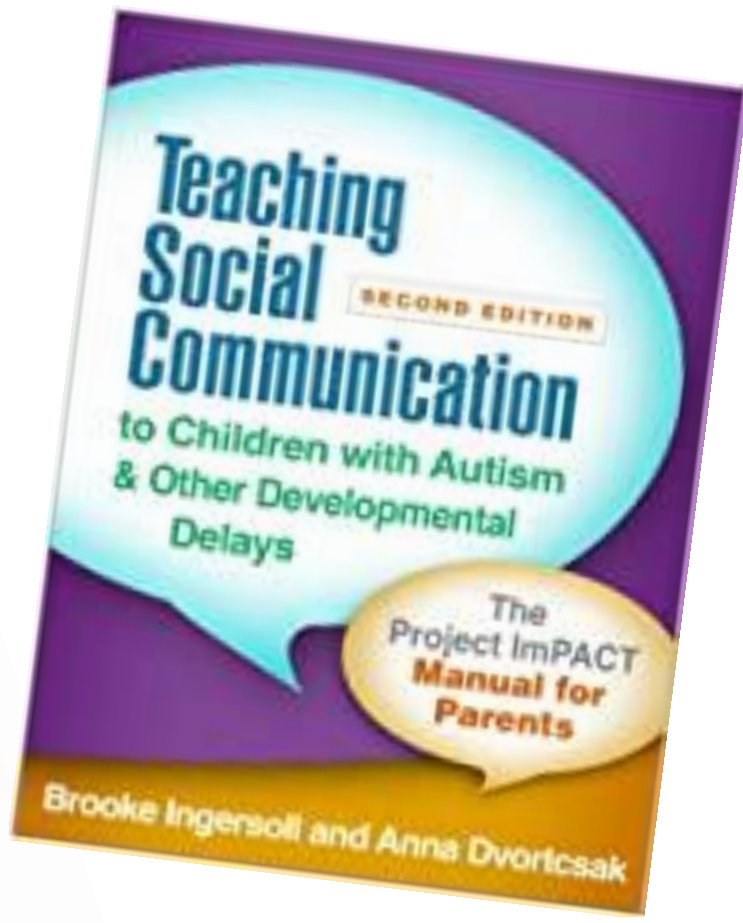
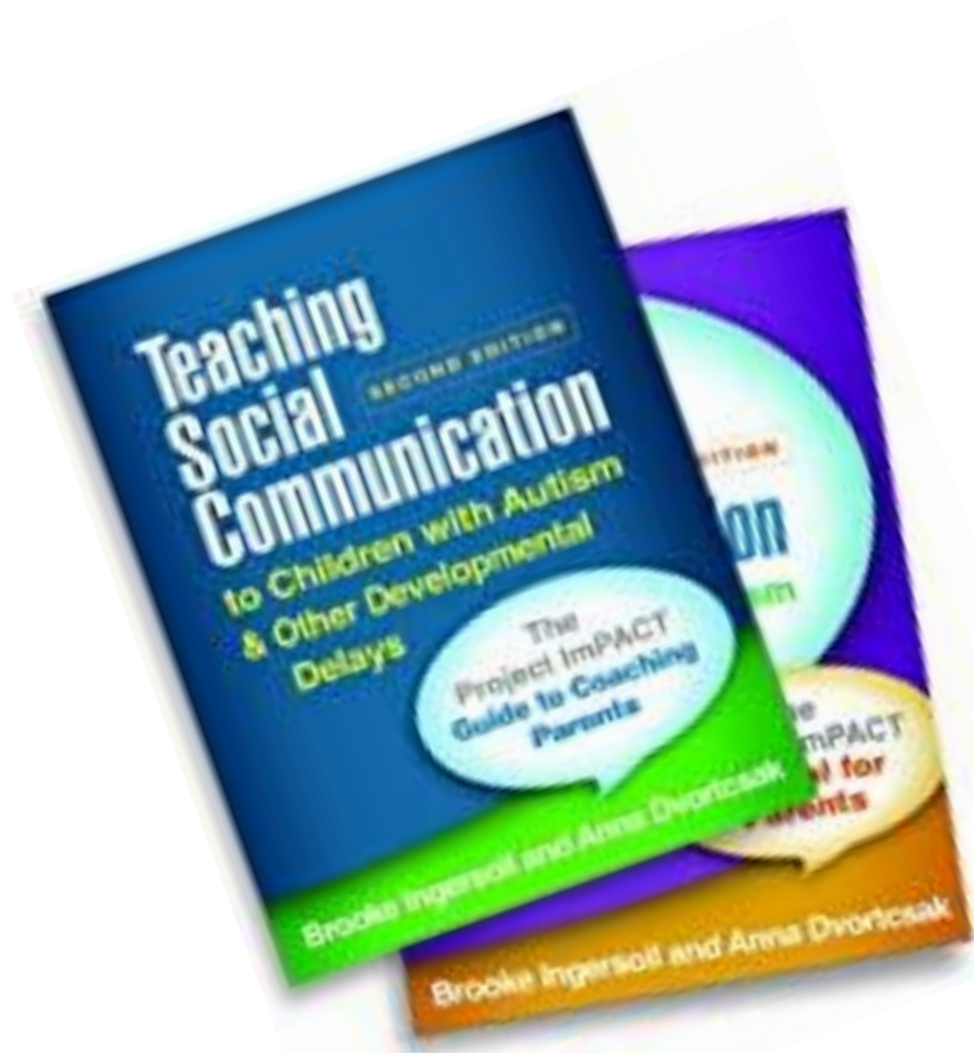
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Abstract

This study reports child and family outcomes from a community-based, quasi-experimental pilot trial of *Project ImPACT for Toddlers* that is a parent-mediated, naturalistic, developmental behavioral intervention for children with or at-risk for autism spectrum disorder developed through a research–community partnership. Community early interventionists delivered either *Project ImPACT for Toddlers* ($n = 10$) or Usual Care ($n = 9$) to families based on Part C assigned provider. Twenty-five families participated, with children averaging 22.76 months old ($SD = 5.06$). Family and child measures were collected at intake, after 3 months of service, and after a 3-month follow-up. Results indicate significantly greater improvements in positive parent–child interactions for *Project ImPACT for Toddlers* than usual care families, as well as large, but non-significant, effect sizes for *Project ImPACT for Toddlers* families in children’s social and communication skills.



Project ImPACT

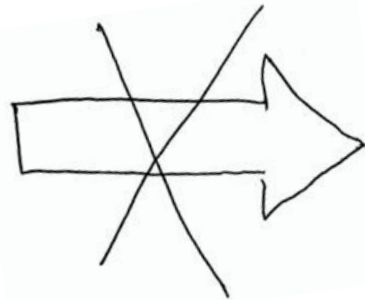
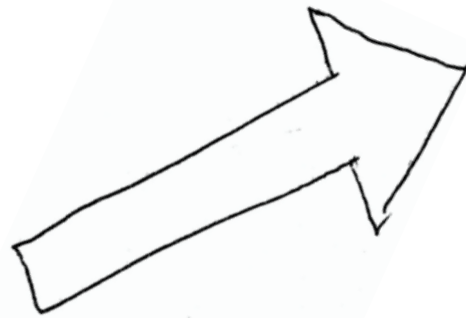
- Evidence Based/Evidence Informed
- New grant for bigger study (100 children)
- Scale up plan to regional trials (1000's of children)

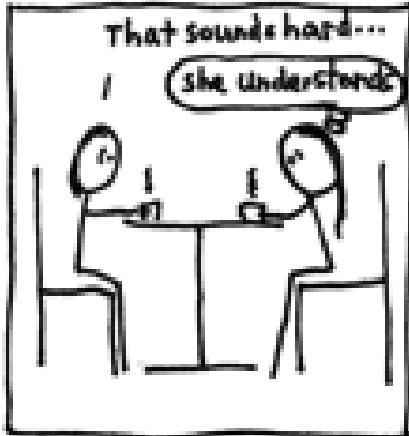
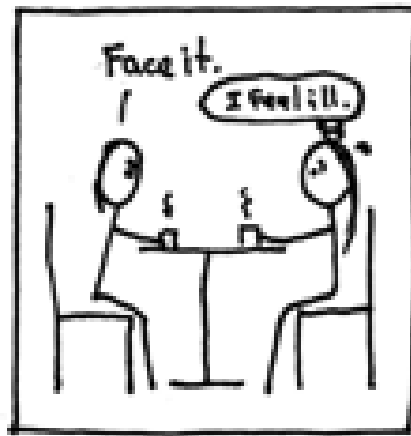
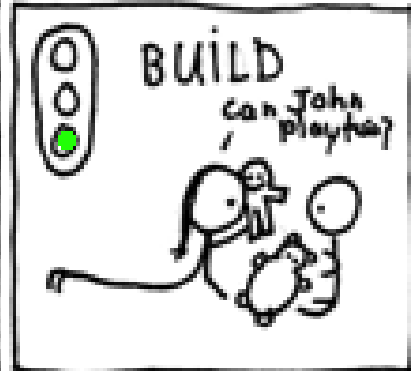
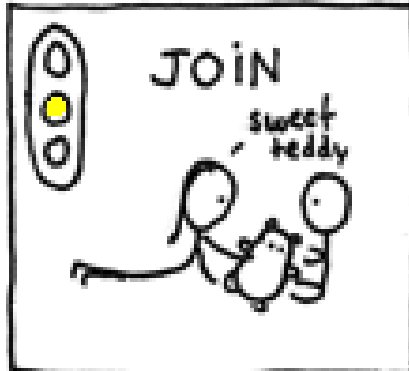
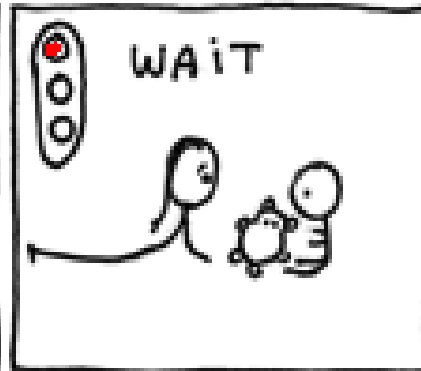
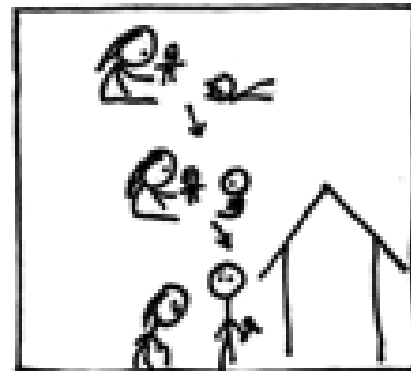
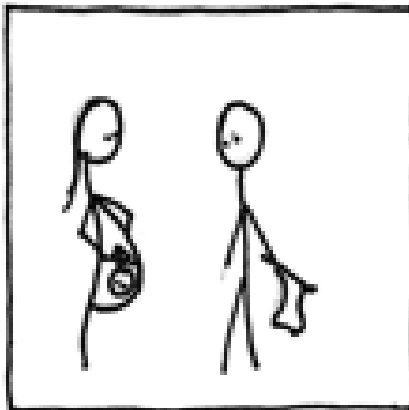
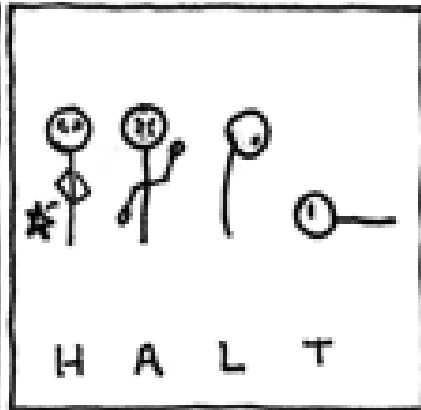
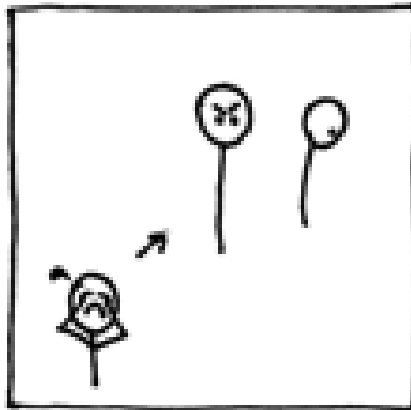
4. The evolved method has now been brought back to the field of trauma and stress to help children and families.

The Early Years Media Initiative For Children

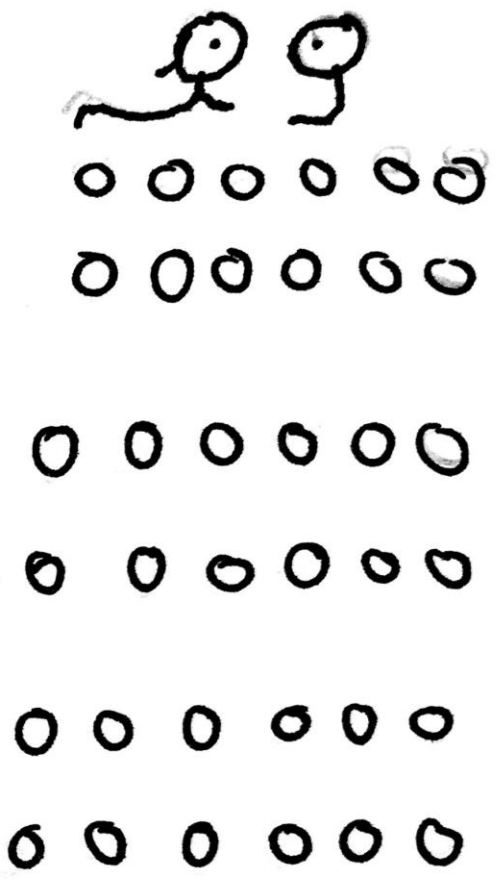
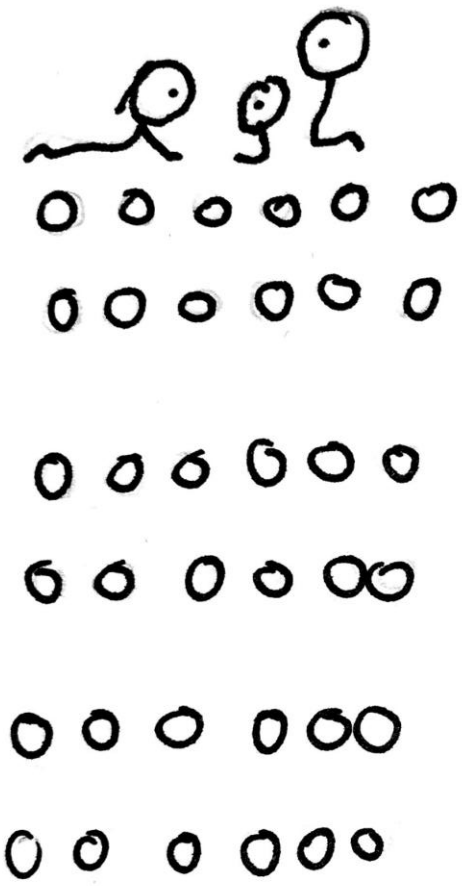








2019 - 2020: Controlled trial in Northern Ireland



Some measures...



child
regulation

Teacher
responsiveness



child
social-emotional
ability

Parent & Teacher
STRESS

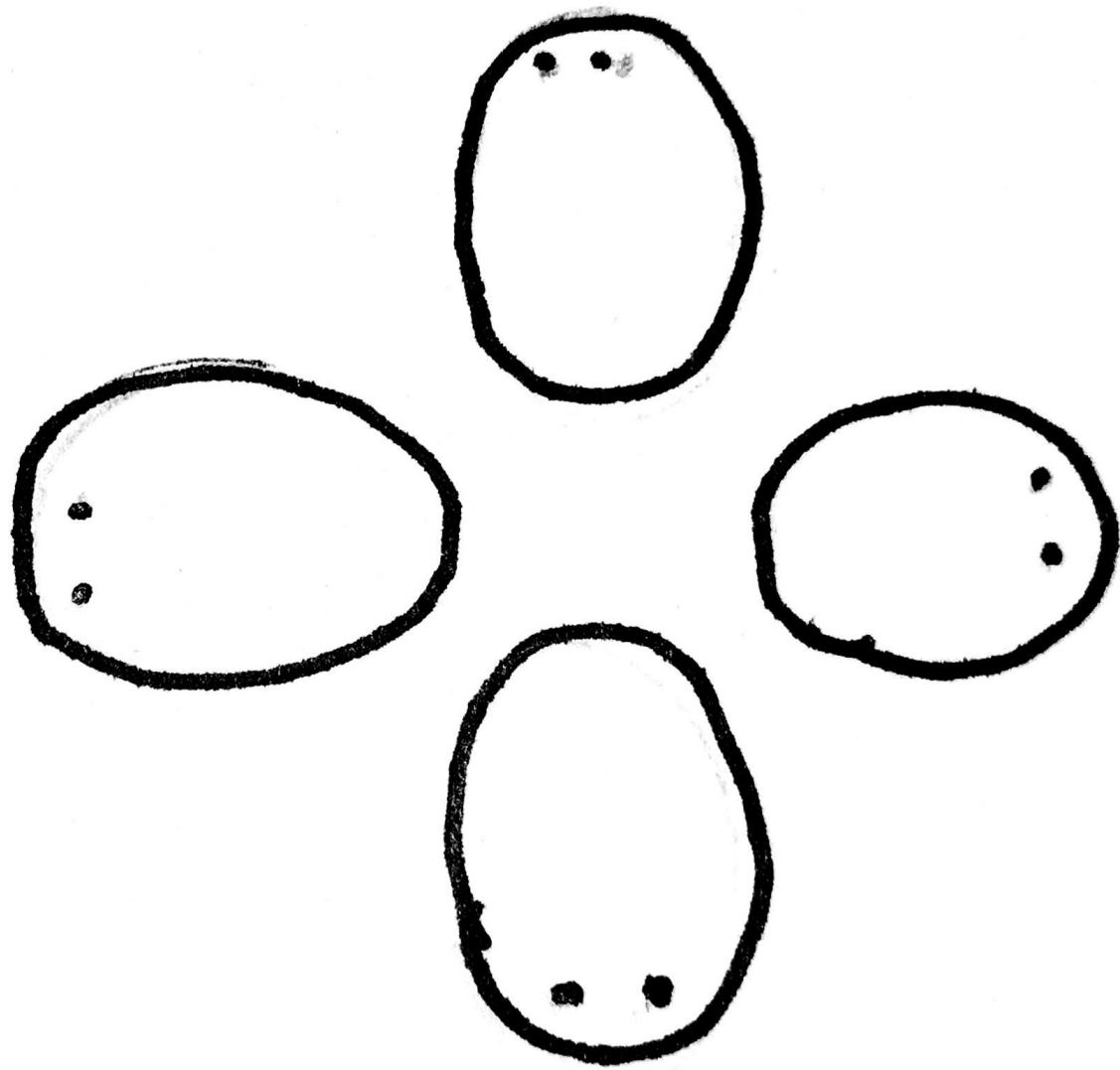


child empathy

It all starts with a circle...



And can help us to live together
in safety and peace
even with our different realities



شكرا