

USING NARRATIVES TO PROMOTE THEORY OF MIND SKILLS IN CHILDREN WITH
AUTISM SPECTRUM DISORDER

by

NAIA-JEWEL SA'RICE PATTERSON

Submitted to the Psychology Department
School of Natural and Social Sciences
in partial fulfillment of the requirements
for the degree of Bachelor of Arts

Purchase College
State University of New York

May 2021

Sponsor: Carolyn B. Cates, Ph.D.
Second Reader: Paul Siegel, Ph.D.

Acknowledgements

Graduating during a global pandemic is no small feat, nor is the work and time that was put into it while working towards said degree. With that being said, I'd like to genuinely thank my senior sponsor Dr. Carolyn Cates from the bottom of my heart for being so understanding and patient with me despite all the hardships I have faced senior year, she is a true gem and overall a wonderful professor and person that gives her all in her field of work. I am so happy and honored to have met and worked with her and everyone in her lab this year! I will genuinely miss her when I graduate.

I would also like to thank Dr. Toskos and Dr. Siegel for giving me good and constructive feedback for my research and research topic. The amazing critiques that I have received from them has genuinely helped me perfect my research paper as well.

I'd like to thank all my peers at SUNY Purchase for helping me with my project and also giving me constructive feedback! We've had our great shares of laughs, tears, and struggles in the psychology department. I'm happy to have met you all and made lifelong friends that share the same passions as me! Congratulations are in order for us all making it and graduating!

Lastly, my thanks go to my family and friends back home on Long Island, who have never been anything but a phenomenal support system for me! I will always take all of your teachings and words seriously and I love you all. While yes, I am a first-generation college graduate, I never would have made it without the support of you all. While two of my biggest supporters (next to my parents of course) no longer walk this earth, I know they are looking down at me with their upmost support. Thank you again, and I love you all.

Abstract

Autism has always been a complex disorder that has been difficult to understand. The causes are still a big mystery to researchers. It is very difficult to diagnose ASD within children at a young age due to how varying the symptoms are. One of the many symptoms of Autism Spectrum Disorder (ASD) is an impaired theory of mind (ToM). Theory of mind is a term used to describe one's understanding that self and others have mental capacities such as thoughts, beliefs, intentions, and desires which guide actions and interactions. It is often postulated that children with ASD struggle in understanding as a result of their lack of ToM skills. It has also been shown that children with ASD struggle with narrative skills, particularly those requiring an understanding of perspectives of characters within stories. Nevertheless, theoretical and empirical support shows that various types of early narrative intervention will help boost the ToM skills of children with ASD. The following review of literature addresses studies that have used narrative intervention in children with ASD and evaluates their effectiveness in the early years.

Keywords: Autism Spectrum Disorder, Children, Narrative Intervention, Theory of Mind, Intervention

Using Narratives to Promote Theory of Mind Skills in Children with Autism Spectrum Disorder

Autism Spectrum Disorder (also known as ASD) is a developmental disability that can cause significant social, communication and behavioral challenges. There is often nothing about how people with ASD look that sets them apart from other people, but people with ASD may communicate, interact, behave, and learn in ways that are different from most other people. The learning, thinking, and problem-solving abilities of people with ASD can range from skilled to severely challenged. Some people with ASD need a lot of help in their daily lives; others need less. Symptoms of ASD include deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; children with ASD may even have some difficulties in sharing imaginative play or in making friends; to absence of interest in peers (Baron-Cohen et al., 1985). The children that have issues withing all three of the categories previously listed can be classified as lower functioning. On the other hand, other children may just have issues the social deficit area and do not have the same cognitive or language impairments; these in children may be classified as high functioning. “High functioning” is a term also often used to refer to people with autism spectrum disorder who read, write, speak, and manage life skills without much assistance. (Donnellan et al., 2015)

While children with ASD tend to deal with a wide spectrum of complications, those complications can range from cognitive delays, to language delays. However, the most common delay for children on the spectrum are the delays within social communications. One of the most commonly noted social cognitive deficits in those who have autism relates to a domain called theory of mind.

Theory of mind (ToM) is a common deficit that characterizes the population of individuals with ASD. ToM is the ability to attribute mental states to us ourselves and others, serving as one of the foundational elements for social interaction. Theory of mind mainly refers to the ability to understand the desires, intentions, and beliefs of others, and is a skill that develops between 3 and 5 years of age in typically developing children. Overall, Theory of mind allows us to understand that others have unique beliefs and desires that are different from our own, enabling us to engage in daily social interaction as we interpret the mental states and infer the behaviors of those around us (Premack & Woodruff, 1978). With this deficit in mind, a wide variety of clinicians and researchers sought to attempt to promote the ToM skills of those with autism. A common technique that is thought to promote the ToM skills of those with ASD is narrative intervention. The success level of this type of intervention is varying, however it is still often tested in many types of research. The current review of literature will review and evaluate the ways in which narrative interventions has been used in order to promote the social cognitive capabilities of children with high functioning ASD.

ToM Capabilities in children with ASD

The theory of mind skills in children that have autism are different versus that of the theory of mind skills within a neurotypical child. Theory of mind is impaired in people with autism. One of the earliest tests for theory of mind is the false-belief test developed by (Baron-Cohen et al., 1985). In the classic version of the test, a little girl named Sally puts a ball into a basket and goes out for a walk. While she is away, another little girl named Anne takes the ball out of the basket and puts it into a box. When Sally comes back, she wants to play with the ball (Baron-Cohen et al., 1985). Where, the children are asked, will Sally look for the ball? ‘In the box,’ children with

autism answer, unable to imagine that Sally might be operating under a false belief. Results reported that children with autism systematically fail the false-belief test. Some children and adults with autism can pass false-belief tests. However, they have more difficulty with theory of mind tasks that do not allow them to reason through a problem

One of the reasons why it could be that children with ASD do not perform as well on standard tests of false belief, is that these tests tend to rely heavily on narrative abilities. Research has shown narrative skills in autistic populations of children to differ from those of neurotypical peers. For example, children with ASD can understand what is going on consecutively, but they are unable to get what is going on with the characters emotionally or the characters reasoning for doing something (Baron-Cohen & Frith, 1985; Losh & Gordon, 2014). This can be expressed in Bruner's (1990) terms (as cited in Pelletier & Astington, 2004) that children with ASD are capable of understanding the landscape of action (the explicit plot and outward behavior of the character/s) but have trouble with the Landscape of Consciousness (the implicit plot, that is, the inner world of the character/s).

Despite difficulties documented, some research promising in that narrative experiences (such as book reading, storytelling, and conversation) can be useful in enhancing ToM abilities for this population.

Narrative Intervention

Narrative intervention is one of the most powerful approaches to language intervention that many specialist and doctors use as a form of therapy for children who have speech impediments. It is mainly described as language intervention that includes storytelling. We define narrative intervention as any language intervention that involves children telling or retelling stories that

have specific language-related features purposefully targeted by the interventionist (Petersen, 2011). In the last 10 years, there has been an increased focus on narrative intervention in research. There is also a great deal of research that shows that narrative intervention can promote theory of mind. One reason that narrative intervention may be useful in promoting ToM is due to the reason that storytelling and book reading are very rich sources of language and may involve greater exposure to words about mental states. Children are exposed to many words about mental states (think, know, believe, remember, dream). Narrative also gives exercise in perspective taking (perspectives of storyteller, audience, and also characters), and children are taught how to practice reasoning; follow characters in goal directed action. Or contemplate why characters do the things that they do.

Narrative Intervention and Theory of Mind

Some research in typical populations has provided evidence suggesting that book reading can promote ToM. For example a study which was conducted by Pelletier and Astington (2004) reports on an analysis of the relation between kindergarten children's developing theory of mind and their understanding of characters' actions and consciousness in story narrative. In this study, wordless picture books were used in order to model landscape of action and landscape of consciousness. Which can be described as two aspects of narrative. Landscape of Action is the explicit plot, the outward behavior of the character/s. Landscape of Consciousness is the implicit plot, that is, the inner world of the character/s. (Pelletier & Astington, 2004)The researchers had the children participate in story retelling and found that Age, language capacity, nonverbal intelligence, theory of mind formation, and children's

ability to organize consciousness and action in stories are all factors to consider. when understanding ToM and how narrative can have an effect on its development within children.

While there is a smaller population of studies that address narrative intervention of children with ASD and the promotion of ToM, quite a bit of studies addresses the effect that narrative intervention can have on neurotypical children versus that of children with ASD. For example, a study conducted by Cates and Nicolopoulou (2019) investigated whether narrative experience, in the form of interactive book reading, promoted the theory of mind abilities of preschoolers. Preschoolers were placed in a group where the reading included mental state themes or no mental state themes. The results of this study found that children participating in book reading with or without mental state themes improved in the theory of mind. Although within this study participants were not on the autistic spectrum, this study does provide evidence that book reading has an effect on young neurotypical children's theory of mind skills

Literature Review

Positive Cognitive Effects

Thus, there is evidence suggesting that narrative intervention can have positive social cognitive effects on young neurotypically developing children. But what about children who have ASD? Can narrative intervention help them as much as it has been shown to help neurotypical peers? Could it help to promote their ToM skills? Cashin (2013) provides some support that it possibly does.. The aim of this study was to investigate whether narrative therapy was effective in helping young people with autism who present with emotional and behavioral problems. The study used 10 young people with autism that varied in ages of 10 to 16 years old. In order to thoroughly evaluate the participants, they were subjected to five 1 hr. sessions of

narrative therapy over the span of 10 weeks.. The results found that narrative therapy had merit as an intervention with young people with autism. (Cashin et al., 2013). Although the study did not properly address whether or not the theory of mind skills of children with autism spectrum disorder was promoted, it did show that narrative intervention over a reasonable period of time had a positive significant effect on the narrative skills of children with ASD. Thus supporting the thought that narrative intervention may have some positive cognitive effects on the ToM skills of children with ASD.

A study that did properly address the promotion of ToM skills in children with ASD was conducted by Dr. Sandra Lang Gillam made the claim that children had “narrative gains and a promotion of theory of mind skills after intervention” (Gillam et al., 2015) The study was conducted in order to find out if a narrative intervention program that directed the utilization of mental state and causal language brought about sure gains in narrative and ToM skills for children with ASD. Within this study, five children (2 girls and 3 boys) who ranged in aged 8-12 participated. Within this study the participants participated in narrative intervention sessions where the children would listen to stories that lasted for two 50-min singular meetings each week for an aggregate of 21-33 meetings depending on the child. Data was collected from the children for about a total of 6 months. The stories that the children listened to were stories that had complex plots, great use of the characters mental states, and many social situations that would have use of social language. However, as time progressed the children proceeded to be introduced to more difficult stories that held more complex storylines and social situations. Whatever the child didn't understand was explained to them after they. Researchers found that the narrative intervention program had a positive significant effect on the children's narrative abilities, therefore increasing the theory of mind abilities as well. This was due to the increased

amount of narrative intervention that was given as the program progressed. The researchers dually noted the clear changes in between the phases of progression in the program. They also found that even after the study was conducted that the children still had great improvement in their fictional narrative abilities. The increased narrative in this instance means was due to repetitive intervention with storytelling and retelling.

A study that was conducted by Chin Hisato Yun in 2001 had some interesting findings that supported the topic as well. Their study was conducted in order to find out if children with autism were able to be trained in order to thoroughly improve their conversational skills. The training had a positive the study also wanted to investigate if said training had a positive significant effect on their theory of mind skills. Three participants with high functioning autism participated within the study, their ages ranged from 5 to 7. The children participated in a multiple baseline that taught them how to initiate conversation, take turns during conversation, listen attentively, maintain a conversation topic, and change a conversation topic appropriately. (Chin & Bernard-Opitz, n.d.). The baseline and training sessions for the participants were conducted in their homes throughout the whole study. The sessions were conducted twice a week for one hour and all sessions were video recorded. Each child participated in a total of nine sessions. In this form narrative intervention, the child would listen to a story, converse with their caregiver about said story, and be prompted to speak more about the story and what they liked about it. The child was instructed that they would be talking to their parent or caregiver if the child had failed to speak to the parent or caregiver after 10 seconds the caregiver would be instructed to initiate the conversation via proposing a topic of the child's interest and wait for the child to respond if the child did not respond after 10 seconds the caregiver would be prompted to acquire a response by asking a question. After the baseline five types of conversational skills

would be taught to the child. Those skills were: Making conversation, turn taking in conversation, listening, maintaining conversation topic, and changing a conversation topic appropriately. Before a new skill would be introduced the trainer would ask the child to recall the skill that they had learned in the previous session the child would then be prompted to recall every step that was involved within the previous session or what they previously had learned the child would be introduced to a new skill using puppets or by playing a game. The child would then listen to a story using the puppets in order to introduce a new social skill after the story the child would take part in a game using puppets to practice the skill that was introduced. In order to have the child practice the skill that was being taught, they would practice the skill with their caregiver for five minutes. after being told that they were able to speak to their caregiver about any topic that they wanted.(Chin & Bernard-Opitz, n.d.). Researchers found that, overall, these children with high functioning ASD were able to be trained to properly hold a conversation with others, using conversational narrative intervention with puppets. During that training they were able to properly and further develop their own theory of mind skills. (Chin & Bernard-Opitz, n.d.) This was due to ToM skills being measured by the improvements that the children made before and after the researchers conducted the study.

Another study that used narrative intervention was a study by Siller (2014) which investigated whether in order to find out narratives elicited using wordless picture books could help strengthen the receptive and expressive vocabulary and the ToM skills of children with and without ASD. A total of 45 children participated within the study 21 of those children had autism spectrum disorder and 24 were neurotypically developing children. Prior to the start of the study, the participants were given assessments to evaluate their narrative skills and ToM skills. Narratives in the study were elicited using one of two wordless picture books; these books

depicted several instances of deception and trickery and provided a rich context for describing the main characters actions. The child would choose one of the two books, then 2 pages of the book would be read to them, after that the child would be prompted to tell the rest of their story on their own, . After that, children would be prompted to continue to tell the rest of the story. The theory of mind abilities of the children were evaluated by using a version of an assessment battery that was developed by Steele et al. (2003). in which tasks were divided into three battery assessments early, basic, and advanced, The early and basic batteries served as a gatekeeper task in order to determine if children were to proceed to the next battery. (Siller et al., 2014) If children were able to proceed to the next battery, then they were given two tasks that administered false belief. The researchers found that after the test children with ASD still have some negative deficits in mentioning characters and understanding their reasoning versus that of neurotypical children. However, they were able to understand narratives a bit better and had better ToM skills versus that of their skills prior to the assessment at the beginning of the study.

A study that was conducted by Wellman (2002) sought to find out if a picture in the head strategy that was developed to deal with thoughts and behavior could help children with autism further understand. The “picture in the head narrative method” that the researchers used was a cartoon thought bubble method. two studies were conducted in an attempt to teach children with autism in picture in the head strategy in order to help them better understand mental states this study used a similar design to previous studies that were conducted. Within study one, 17 male children with autism with ages that ranged from ages 8 to 18 more participated. The participants were taught individually in a quiet room for up to five sessions that lasted for 30 minutes a day. The participants would then participate within smarties false belief pre-test and then a Sally-Anne task, which is a task that focuses on false belief by the change of location. During the

Sally-Anne task the participants would also be introduced to thought bubbles as each session progressed the participants would move on to a different stage once the participants participated in all six stages then the study was complete the Sally-Anne task was modified a bit within this study. Within this study the Sally-Anne task used toy bears in order to test false belief. As they progressed in the stages thought bubbles would be incorporated within the Sally-Anne task in order to show narrative regarding the bears reaction to the location of the marble(Wellman et al., 2002). Results found that the children understood the thought bubbles very well when paired with the false belief task.

Within study 2, ten children with autism between the ages of 5 and 17 participated. The children participated within the Sally-Anne task only this test had a storyboard type setting with cardboard figures. The Cardboard figures would be cutouts of Sally and Ann dolls, the figures would also have cut out objects along with a storyboard stage in order to properly set the scene. within study two the participants also had a training stage but unlike study one the training stage involved thought bubbles that would show them pictures of the objects that were included within the storyboard of the Sally-Anne task. The participants would then participate within the same six stages as listed in the previous study. The researchers found that group 2 did a bit better versus that of Group One within understanding the false belief task. although both groups were introduced to thought bubbles. Group two was introduced to thought bubbles prior to participating in the study versus that of group one.

Another study that was conducted by Baren-Cohen somewhat goes hand-in-hand with the thought bubble study (Wellman et al., 2002) in providing evidence that children could use a false belief task in order to help them think in a different way. Much like the thought bubble study used thought bubbles this study used pictures in order to help children with autism further

understand ToM. Within this study 8 children from ages 8-11 with autism were taught a different type of strategy in order to help them solve a wide variety of ToM problems. Much like the thought bubble article this study also focused their teachings on the false belief task. The children were taught the picture in the head strategy by using a mannequin head that had a slot on top of it. The children would get the opportunity to pick a picture from inside the slot and they would have to explain what was going on in said picture. As the sessions progressed every picture would get more complex than the previous one. As the sessions progressed the participants would progress in different stages. Those stages were: 1. Assessing basic rules for the photo analogy. 2. Assessing spontaneous use of the basic rules for solving the false belief task. 3. Teaching explicit rules linking the photo to mental states (3 steps). 4. explicit rules linking the photo to actions. (Swettenham, 1996). The teaching took place over five days in a quiet room within the school, with one session per day lasting approximately 40-60 minutes. The researchers found that after the experiment that incorporated narratives with story retelling, most of the students with ASD were able to understand photographic representation during teaching and could properly understand how characters in stories would act however the children could not use this photo strategy in order to predict the characters mental state.

A study that was conducted by Eleni Peristeri wanted to investigate the narrative skills of 30 children who spoke Greek of the normal range (ASD-HL), and 14 in the lower end of the normal range (ASD-LL). The control group consisted of 15 age-matched typically- developing (TD) children.” (Peristeri et al., 2017) This study had a total of 5 questions that it wished to investigate. “Will the difference in the language ability of the two groups of children with ASD affect frequency of use of complex? The researchers used a number of questions about group differences in language use in order to investigate the use of ToM-related ISTs. The design of the

study had 30 monolingual Greek speaking children with ASD that ranged in ages of 6 to 12 participated within oral retellings that would be elicited using a single picture story from the admin narrative norms instrument that had been designed to collect negative data from children through storytelling. . When the child would finish listening to the story the child would view 13 pictures on a single slide on the computer screen and then the child would be asked to retell the story to the examiner. Unlike other studies, this study not only addresses high functioning children with ASD but also low functioning children with ASD Researchers found that more use of narrative should enhance the synaptic complexity of narration in children with high functioning ASD. The ToM skills were also increased by a significant amount. Researchers also found that the participants did not do well in the production of ToM unrelated tasks.

Limitations

There were not many limitations that, while they were not all of them were officially listed within these studies. They were made note of. One limitation that should be made note of is the amount of intervention that is given. In quite a bit of the studies mentioned within this literature review narrative intervention was given over a long-extended period of time but not reasonable time interval. A prime example would be the Gillam Study. Within that study participants only had a session two times a week for about six months,. Overall, the intervention periods listed within this literature review would not be spaced out efficiently enough. The most recent study that is listed in this literature review was dated back in 2017. Quite a bit of studies would seek to compare them to neurotypical children making the search for studies that only address children with ASD quite difficult. A smaller number of participants could be beneficial in some instances; however, it can also be limiting.

Discussion

Overall, the goal of this literature review was to find out if narrative intervention had a positive effect on the theory of mind skills of children with autism spectrum disorder. So far, the studies that are listed within this literature review have provided significant evidence to the statement that narrative intervention could help children with autism understand and strengthen their theory of mind skills to a significant degree.

However, there was a significant number of issues that should be addressed about a lot of the studies that are listed here. For example, as previously stated in the limitation section the time interval between the interventions of the studies could be a little more spaced out in order to get better results, also most of the studies that are listed within this literature review used the false belief task along with story book reading or story retelling. Some studies also mentioned the effect that theory of mind had on narrative but failed to directly measure it. There could possibly be some change depending on the type of narrative, would results be different had they used a different type of narrative intervention aside from storytelling, book reading, story retelling, and story engaging?

There could also be a possibility that the setting of the study could have an effect on the result. Most of the studies were conducted within a home setting, while some were conducted within a school setting what if they all were conducted in the school setting with the results had concluded differently? There also should be a better number of studies that address narrative intervention with autistic children without having to compare them to neurotypically developing children. Quite a bit of studies have had the tendency to compare the two groups, there could be possibility that studies that seek to test only children with ASD and narrative could prove to

further the research and understanding on the topic. However, many studies did not thoroughly measure ToM as well as others.

References

Autism: The Movement Perspective | *Frontiers Research Topic*. (n.d.). Retrieved May 11, 2021, from <https://www.frontiersin.org/research-topics/801/autism-the-movement-perspective>

Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a “theory of mind”? *Cognition*, *21*(1), 37–46. [https://doi.org/10.1016/0010-0277\(85\)90022-8](https://doi.org/10.1016/0010-0277(85)90022-8)

Cashin, Andrew & Browne, Graeme & Bradbury, Joanne & Mulder, Ann. (2013). The Effectiveness of Narrative Therapy With Young People With Autism. *Journal of child and adolescent psychiatric nursing: official publication of the Association of Child and Adolescent Psychiatric Nurses, Inc.* *26*. 32-41. [10.1111/jcap.12020](https://doi.org/10.1111/jcap.12020).

Cates, C., & Nicolopoulou, A. (2019). The effects of bookreading with and without mental state themes on preschoolers’ theory of mind (pp. 129–149). <https://doi.org/10.1075/sin.25.07cat>

Chin, Hsiao & Bernard-Opitz, Vera. (2001). Teaching Conversational Skills to Children with Autism: Effect on the Development of a Theory of Mind. *Journal of autism and developmental disorders*. *30*. 569-83. [10.1023/A:1005639427185](https://doi.org/10.1023/A:1005639427185).

Donnellan, A., & Torres, E. (2015). Autism the movement perspective. *Frontiers Media SA*.

Fernell, Elisabeth & Eriksson, Mats & Gillberg, Christopher. (2013). Early diagnosis of autism and impact on prognosis: A narrative review. *Clinical epidemiology*. 5. 33-43.

10.2147/CLEP.S41714.

Gillam, Sandra & Hartzheim, Daphne & Studenka, Breanna & Simonsmeier, Vicki & Gillam, Ronald. (2015). Narrative Intervention for Children With Autism Spectrum Disorder (ASD). *Journal of speech, language, and hearing research : JSLHR*. 58.

10.1044/2015_JSLHR-L-14-0295.

Peristeri, E., Andreou, M., & Tsimpli, I. M. (2017). Syntactic and Story Structure Complexity in the Narratives of High- and Low-Language Ability Children with Autism Spectrum Disorder. *Frontiers in psychology*, 8, 2027. <https://doi.org/10.3389/fpsyg.2017.02027>

Pelletier, J., & Astington, J. W. (2004). Action, Consciousness and Theory of Mind: Children's Ability to Coordinate Story Characters' Actions and Thoughts. *Early Education and Development*, 15(1), 5–22. https://doi.org/10.1207/s15566935eed1501_1

Petersen, Douglas. (2011). A Systematic Review of Narrative-Based Language Intervention With Children Who Have Language Impairment. *Communication Disorders Quarterly*. 32. 207-220. 10.1177/1525740109353937.

Siller, Michael & Swanson, Meghan & Serlin, Gayle & Teachworth, Ann. (2014). Internal State Language in the Storybook Narratives of Children with and without Autism Spectrum Disorder: Investigating Relations to Theory of Mind Abilities. *Research in Autism Spectrum Disorders*. 8. 589-596. 10.1016/j.rasd.2014.02.002.

Slaughter, V., Peterson, C., & Emily Mackintosh. (2007). Mind What Mother Says: Narrative Input and Theory of Mind in Typical Children and Those on the Autism Spectrum. *Child Development*, 78(3), 839-858. Retrieved April 20, 2021, from <http://www.jstor.org/stable/4620672>

Swettenham, John & Baron-Cohen, Simon & Gomez, J & Walsh, S. (1996). What's Inside Someone's Head? Conceiving of the Mind as a Camera Helps Children with Autism Acquire an Alternative to a Theory of Mind. *Cognitive neuropsychiatry*. 1. 73-88. 10.1080/135468096396712.

Wellman, Henry & Baron-Cohen, Simon & Caswell, Robert & Gomez, Juan & Swettenham, John & Toye, Eleanor & Lagattuta, Kristin. (2003). Thought-Bubbles Help Children with Autism Acquire an Alternative to a Theory of Mind. *Autism: the international journal of research and practice*. 6. 343-63. 10.1177/1362361302006004003.