
WLSA SHANGHAI ACADEMY

*(G11-12) 2 Zhengxi Road, Yangpu District, Shanghai, 200243*
*(G10 & A Level) 299 Tongji Road, Baoshan District, Shanghai, 200940*

*WLIFE*

# CONTRIBUTOR

## Art Gallery
Angle An
Coco Chen
Len Li

## Science Lab
Anita Wang
Cecilia Tang
Eileen Yao
Eric Xie
Jenny Zhao
Jenny Zhu
Lisa Pan
Michael Wu
Stephanie Liao
Stephen Cheng
Sundy Xu
Yvette Yang

## Literature Workshop
Amarias Qiu
Joanna Zhu
Lucy Diao
Myra Lyu
Olivia Jiang
Yuki Wang

## Campus Life
Keven Wang

## Design & Illustration
Ailli Liu
Austin Zeng
Bill Yang
Eddie Fang
Elliot Jin
Hannah Shi
Jason Qiu
Jenny Zhao
Jessie Wang
Leif Li
Lily Yin
Lily Li
Lucy Diao
Phoenix Liu
Rachel Wang
Reyna Feng
Yuki Wang
Yvette Yang

## Cover Artwork
Angle An

## Cover Design
Austin Zeng

## Editor in Chief
Yuki Wang

## Managing Editor
Celina Chen
Joanna Zhu

## Director of Digital Media
Austin Zeng

# Dear Readers

Sweet-scented osmanthus blossomed and withered; Ginkgo Biloba turned yellow then fell; rain poured then stopped. Autumn melted into the phoenix tree leaf that welcomed the winter. Dressed in overcoats, WLSA students still burn like fire in the biting wind, and their passion lightens the whole campus. With everyone's help, our second WLIFE comes in time. One of the most prominent qualities of our WLSA Shanghai Academy is its "Diversity:" Identity, Interests, Passion, Leadership. Here, every individual has special traits that make them unique enough to create and contribute to the community, even making a change in society.

Themed "Diversity," the second issue of WLIFE, October-December 2021 Edition, includes sections of Art, Science, and Literature that explored diversity from different perspectives. For art section, drastic colors and varied lines collided together in distinctive forms, and the Eastern and Western cultures integrated and harmonized in the style of painting. The origin of our history is explored in language, and our behavior is observed in psychology. In this feast of wisdom, diversity promotes our creativity and critical thinking, which brings us to the knowledge of wonderland.

Just like Jacqueline Woodson said, "Diversity is about all of us and about us having to figure out how to walk through this world together." Exploring diversity helps WLSA students to deepen their understanding of inclusion and the meaning of life. During the intense school year, diversity penetrates our hearts and becomes the special power to love the world as always.

Warm regards,
Yuki Wang

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# ART GALLARY

# 《Self-Portrait》

参照诺艾米·伊巴兹的风格做的尝试

| By 2022级 Kappa Angle An






# 《Madam》

村上龙太阳花的尝试

| By 2022级 Kappa Angle An

# Prison

- By Coco Chen from Theta

Introduction

This work is a wood clock. Surrounded by world filled with flowers, we have to wear masks, the persona. We are sad, playing the role of clown. We feel disgusted, but reluctantly nod heads. Under the heavy shadows, when can we put aside the flowers and plants that are raging in front of our eyes.

Creation Intention

Everyone has been to heaven, because that was the initial starting point, from where it was born and descended into the world. While still above the clouds, purest soul unreservedly showed will and boldly raised questions. I am a female, but as a male. I am a male, but as a female. Why? I looked at my body in deep thought. Should I jump off the clouds to become a member of the human beings? Will I be considered a weird person? In fact, everyone's existence has its own unique meaning, whether you are a male or a female, only you can decide, not the reproductive organs, and not the evaluation of others. Don't deny your existence just because you are different. Live yourself and be yourself.

# 《混沌》

*Serigraphy Artwork*
*By Len Li G11 Sigma*

总有些美好的事情发生

请允许我

安心领受你的馈赠

并感谢上帝

感谢上帝有你

以及世间一切美丽的事物

我心存感激

但不敢耽于欠负

因为若馈赠于你是美好的

接受于我亦当如此

总有些美好的事情发生

有些美好的人活着

哪怕我不曾遇见

哪怕不发生在我身上

这样的事啊

只想一想，就不孤独

——海桑


# 临摹雷诺阿作品

| By 2022级 Kappa Angle An

# 新派山水

| By 2022级 Kappa Angle An



# LITERATURE WORKSHOP

# ROOT

*Yuki Wang from Theta*

‘Where are you from?’, tinged with just enough humor
and self-deprecation to disarm and charm.
Who am I?
I am all that is half-forgotten,
half-mourned, half-understood.
I am all the places in which I’ve left my heart.
I am all that is buried deep inside and want to excavate no more.
I am all that I dare not show you
for fear that you will drown.
-----Marina Sophia

It’s going to be ok.
It’s going to be ok.
I always want to say this to you. If I had a chance.

Because I know where you are, both mentally and physically. I know that you curled up beside the toilet and cried with no sound. I know that you immersed in the ocean of strangeness and loss. I know that you stared at the phone but even the virtual would give you no sense of satisfaction. I know that you wandering like a ghost but find no way in the wilderness. I know when you stare at the mom’s face you want to say “I am tired”. I know you hate the breathless metro where colorful skins pushed you to undesirableness. I know the place that emerges in your dream thousands of times.

The little town called Wenzhou. It is such a beautiful name and when every time I read this word on my tough, just like chewing a piece of gum, I sense a taste of sunshine and water mixing up together, and such smell stays in my memories for a long time.

The people who lived there is not purely kind, nor friendly, nor caring. But they are predictable. Just like dropping balls with different mass from the midair, and the two balls touch the ground at the same time.

I hate the teacher who taught me in kindergarten, she makes me stand there for a whole period of class. My legs were sore but I could not complain. However, I still know that she is someone I am familiar with. I know how she is going to react if I left rice on the plate or spit on the ground. Even though she did not like me, she and I are essentially the same kind of people. We are raised in the same place, with some soil, same food, same groups of people.

Willows and banyan sprout out in the same land.

But that small country is a totally different world where atoms bouncing around against the physical world. When you want to stretch a handle but only grasp a hand of air, you know you are transplanted into different soil.

Singapore. When you chewing this word, sunshine and perfume wrap every cell in your mouth. They said they are Singaporean. But they looked exactly like me. They speak Chinese, at least a similar language to Chinese that I can understand. But the way they use their tongue is another story for me. Sunshine scorched the ground. It shines in a different way than I used to know. It burns exhaustedly, sucking our body dry and killing itself behind the bright moon.
Does not only yellow skin scatter around. White, black, white and black. I know you hate this. Floating in the senseless sea, water engulfed you, covering your ear and eyes.

Everything is unpredictable. Even it seems it is, it is not.



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I remember when you first stepped into that campus. That huge campus with polished utilities and expensive uniforms. “Why there are so many Chinese this year?” That sentence becomes your nightmare until your feet left that land. Like a shovel, you heard a clear “Pooh”, that was the sound of uprooting the tuber from the soil. But you know, you left the old and familiar land a long time ago. Such sound only emphasizes such fact for no reason. At this moment, you understand, you no longer stand on that small town called Wenzhou.

Adults told us quantity matters. But sometimes it is not the case. In this lofty building, we are the majority. But we are the weakest. It starts from self-introduction. “Hi, where are you from?” “I am from China.” Or maybe it starts from the first glimpse. Yellow skin with black eyes and black hair.

You don’t say they are racist. This is a harsh claim in Singapore because Singapore is the centre of diversity. But you still feel the circle formed around you but you have space in none of them. Breadfruit tree, cotton tree, olive tree, dragon tree. While willows seem does not fit, standing near the soft river, swaying their branches with the wind softly.

Do you remember Sophia? The one who is from Myanmar? Yes. I know. She is a nice person. But in that public speech… Yes, I understand that she does not mean it. But she still said that “Even Chinese become more talkative with us.” It is praise. But we know behind that there is a drowning claim means Chinese usually do not talk to us. They are not one of us. They are Chinese. Why “Chinese” make a difference? Because they are Chinese. That’s what they are.

Once she said it, she realizes she said something wrong because the audience started to whisper to each other. “Hey, that is racism.” “She can’t say that.”

I don't blame her. She is one of my friends. But I know she is no different from others. Those people stared at you with condemning eyes. Those people said, “Why there are so many Chinese this year?”. Those people who turn around to refuse to talk to you. Those people who stand up when you sit down.

Even from the daily chat, “Hey, you are different from other Chinese.” I know the words behind this sentence. But I know she means this as praise. I feel shame about that. But more shamefully, I am the person who said “Thanks” to reply.

Just like dandelion, flying around but find no place for home. Wind compels you to continue your journey but the small seeds yelled “Stop! Stop!”
The wind never stops.

I know you want to screen in that land. In that school. In that metro, where all those people stuck together and you shrink yourself smaller and smaller in order to fit. The smell of perfume, the smell of different kinds of perfume. The language, the different kinds of languages. The eyes, all similarly cold and indifferent eyes. I know what you want to yell. When I remember every time the door opens, you rushed toward the outside like a prisoner running out of the jail. “Let me out!” you want to yell.
“Let me out!”

You started to be afraid to talk to them, even when they look like you because you know you have to speak English.

It is not about English. It is about trying to throw away your original soil and embrace another. You cannot speak Chinese in school because teachers and classmates stared at you like you are a monkey. You should not speak Chinese at home because mom wants to you practice English all the time. But then when? When waiting for the call from dad, when you are alone when nobody listens. Spy covers his identity to complete a mission. You do as well. The mission for you is to kill yourself.

Sometimes you find yourself to be too flat. “Where are you from?” “China.” That is all. At least, that is what other people think they need to know.
“Where are you from?” “Oh my dad is American and my mom is Japanese. I think I am more German because I grow up there.” That is so cool. I can’t have that.
Then you started to hate yourself. Because you are not

cool enough. And you cannot kill the original you to become cooler.

But that is ok.
But that is ok.

When I reflect upon those experiences, I understand that "where are you from?" cannot give you any useful information to know about one people. When people ask "where are you from?", I know what they want. They want to know me, from one single answer to one single aspect. But that is not how the world works.

When I answered the word "China", I can see a familiar expression on their face. Good at math. Bad at English. Chopstick. They seem to understand everything.

But you know they are wrong. You just don't say.

Say it. Don't hesitate. Because you know you are right. You know you are not only Chinese. You are a woman. You are in the middle class. You can love girls. You have a mom who goes everywhere. You have a dad who reads everything. You are not good at math. You speak English. You do not believe in Buddhism.

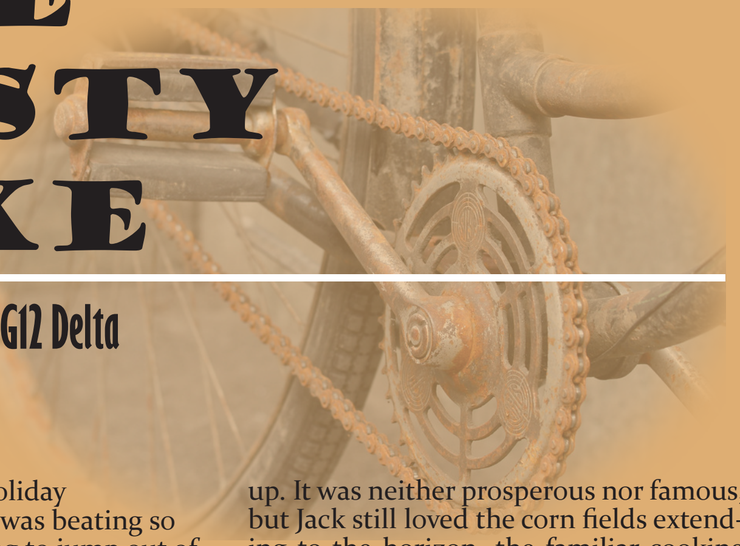
You can be American. You can be Japanese. You can always keep your original identity. Because myself is not made up of one single atom but with different elements. Race, Gender, Social Class, also a big portion of me is made of experiences. Gradually, you will accept different cultures, understand various ideas, realize the immaturity of your original thoughts, and acquire another perspective to survive in the world.

Someday, you will find out that you are not the willows near the river but the water in the ocean. You include everything but also reflect everything. Nothing was occupied by you but you also miss nothing. Soil deposit on the riverbed and become part of you. You never feel drowned in the metro where it is full of strangeness and unfamiliarity. Singapore is no longer a world with atoms following no physics rule, rather you find the pattern in it and adapt.

Water flows and fits in any containers.
I always want to tell you. If I had a chance.
It's going to be ok.
That you will be a better person just like I am.



# THE RUSTY BIKE



## Written by Lucy from G12 Delta

### I

The National Day holiday began. Jack's heart was beating so fast that it was going to jump out of his chest—there was a whole week for him to have fun! The cool wind in autumn softly blew the trees along the road. Several withered yellow leaves fell off the branches, landing slowly in the basket of his bicycle. This old bike, bought when his father Tom and mother Helen got married, was his only transportation. There were reddish brown patches that showed signs of rust all over the bicycle, and the bell had refused to work since last year.

Striving to stamp the clumsy pedals, Jack could not help complaining to himself, "Oh, this rusty bike is too difficult to ride! Why won't father and mother plan to buy me a new one?"

Partly covered by the fallen leaves, a basketball with faint stains lied quietly in the front basket of his bike, which reminded Jack of his recent quarrel with his father who thought playing basketball did no good to his study.

"I just want to find a way to relax. He never truly understands me!" Jack let out a short sigh.

### II

It was almost noon when he reached Shenze, a small rural town where he grew up. It was neither prosperous nor famous, but Jack still loved the corn fields extending to the horizon, the familiar cooking smoke flowing out from chimneys, and the farmers who always greeted him with a big smile.

He was eager to meet his parents who he knew were working at the construction site to build their new house. When he arrived there, Jack was choked by the overwhelming dust before he could open his mouth to greet his mom and dad. Some fine sands even flowed into his eyes. Helen was the first one to see Jack coming. She immediately stopped her work and ran to him.

She gave Jack a big hug and cried, "Oh my son, I have been missing you so much the past whole month!" She looked a little haggard with wrinkles around her eyes and forehead.

Jack smiled. "I miss you too, mom."

Over Helen's shoulder, Jack saw his father Tom working not far away. He just looked towards Jack for a second with indifferent eyes and continued to smear cement on the walls as if nothing had happened. Jack's heart sunk all of a sudden. His fire of excitement was completely extinguished by the aloofness of his father. Feeling extremely disappointed, Jack abruptly turned around, mounted onto that rusty bike, and rode away as fast as he could. Helen kept shouting ea-

gerly, “Jack, come back! Come Back!” But Jack did not turn around his head for a single time.

That afternoon Jack began to feel bored about staying at home and could not suppress his desire to play basketball. Although he knew that Tom would definitely be angry if he saw him hang out with friends to “waste their precious time on a dirty orange ball”, Jack persuaded himself, “Who cares about what he says! After all, he has already ignored me.”

Jack sneaked out of his home and galloped towards the basketball court in the town. He ran from one side of the court to another like a wild horse and laughed loudly, his clothes saturated with sweats. He was about to give a perfect three point shot, but suddenly there was a great pain in his eyes. He covered them immediately and could not help falling to the ground!

# III

When Jack became conscious again, he found that he was lying in an emergency room. The sky outside was turning increasingly gloomy. Momentarily, he felt a strong sense of dizziness: every object became blurred and seemed to have two figures that overlapped before his eyes. When he was still confused and panic about what had happened, a conversation floated into his ears.

“His diplopia is the result of inflammation in the muscles that control his eyeballs,” a doctor said calmly.

“Doctor, my son can recover to his normal sight quickly, can’t he?” It was Helen’s nervous voice.

“Sorry madame, I cannot guarantee that the treatment will be successful. There is only a faint hope for complete recovery.”

There was no reply. Jack could only hear his mother’s continuous sobbing and a loud thunder indicating a rainstorm outside the window.

“I have got an eye disease that is hard to be cured! Will I drop out of school? If I have to, what about my basketball dream? What about my best friend who plans to get into the same college with me? What about ……” Jack could not help thinking about all the potential misfortunes.

At that moment Tom came into the emergency room. His steps were rapid and his face resembled the dark clouds in the sky. “I have told you thousands of times not to play basketball, but you just do not listen! Now you have to endure this bad result you deserve! When can you grow up to know how to take care of yourself?”

“Playing basketball is something I really love! Why do you always try to suppress my happiness?” Jack shouted back furiously.

“Thanks to your great hobby, now your own eyesight is ruined! Do you know how anxious your mom and I feel when we were waiting for the diagnosis in the hospital corridor and kept looking at the time that seemed to stop flowing? Have you ever considered the bad consequences your caprice brings to yourself and your family?”

Tom was so furious that he grabbed a glass cup on the bedside table and threw it heavily to the ground. There was a loud “crash” and the water squirted all over the place.

Jack did not reply. He was half furious and half upset. Suddenly he thought of the rusty bike, which had already had numerous little sags made by clashes and whose wheels always let out great noises while spinning due to strong friction. His relationship with his father, like that old bicycle, was just on the way of obsolescence.

# IV

Autumn quickly passed and winter was coming. Tom had stopped the work at the construction site and carried Jack to all hospitals for effective treatment. Their only vehicle was that old rusty bicycle.

“Do you feel cold?” Tom often asked.





It was the only conversation they had. When they were riding across the field which was now bare without a single weed, Jack always thought of his childhood when he and his father were still intimate friends. At that time, Tom would tell jokes or sing songs to him to make him laugh out loud. For little Jack, his father’s wide back always protected him from the fierce winds and made him feel relieved.

When his mind jumped back to reality, Jack realized that Tom had become a lot older and thinner. His hair that sparsely covered his head almost all turned white and were swaying in the chilly wind. His back, now bending a lot, was not wide and secure for Jack anymore. He could not help breathing heavily when he strove to keep the rusty wheels moving. However, he never attempted to slow down his fast riding pace.

At that moment, Jack felt something salty in his mouth. It was his tears.

The days unconsciously flashed away. Every time Jack and Tom went to a new hospital, they were informed the same message that diplopia was hard to cure and that Jack had better get prepared for a lifelong eye disease. The last dim hope in their heart was gradually fading away.

One night after Jack had gone to sleep, Tom came into his bedroom on tiptoe and quietly sit down at the edge of his bed. “My dear son, do not worry! I will try my best to find the most skilled doctor who can definitely treat your diplopia!” He rubbed Jack’s hair very softly with his rough hands.

When he noticed that Jack was tightly holding his basketball in his arms, Tom suddenly felt that his heart was sharply stabbed by hundreds of silver needles. He said to Jack regretfully, “I should not forbid you from basketball! I just worry that it will take up too much of your time. Please forgive Daddy! I will be more patient the next time I talk to you about playing basketball.”

He lowered his head to kiss Jack gently on the forehead, and watched Jack with affectionate eyes before closing the door.

# V

Shenze had welcomed its midwinter. Every year there were several days when thick snow would put a huge white coat on house roofs, lanes and spacious corn fields in this small town. Jack was sitting by the window, feeling a little bored. With his poor sight, he could still discern large pieces of snowflakes swirling down lightly, as if dancing, to the ground. The road was soon covered with a thin layer of ice.

Bump!

The door of their house was pushed open and Tom was standing at the doorway. He was like a snowman in white clothes and shoes, and his face had several patches of blue and black. He seemed not to notice his wounds and straightly darted to Jack.

“I have found a doctor who had promised to cure your diplopia!” He shouted with little sparks shining in his eyes.

Half hopeful and half suspicious, Jack was taken to a small warm clinic where vibrant fire was dancing in the stove. Dr. Scott, an affable man with gray beard, let Jack sit by the desk and carefully examined his eyes. “Your disease is not very serious. I have met patients who have similar symptoms before. I am confident that you will recover to your normal sight very soon!”

His magnetic voice instantly made Jack feel very relieved. Out of intuition, Jack turned to his father and smiled gratefully. To his surprise, Tom smiled back at him. At that transient moment, he suddenly realized that he and his father had not smiled to each other for years. He felt that a hot spring flowed all around his body and ultimately warmed his heart.

# VI

Dr. Scott treated Jack with special acupuncture. He inserted several long thin needles in Jack's acupoints to help him relax his eye muscles and alleviate his inflammation. Jack felt that the world grew clearer and clearer before his eyes. At first, he could just tell the approximate shapes of different objects, but gradually he was able to discern the warm sun, the trees outside his bedroom window, and even the cute little squirrels climbing up and down the tree trunk lively after a long period of hibernation. After two months' careful treatment and proper rest, Jack successfully retrieved his normal sight. He immediately expressed his strong wish of going back to school to his parents, which made Tom and Helen both shocked and delighted.

On the first day of the new semester, Tom rode the old bicycle to send Jack to school. Standing beside the door, Helen waved goodbye to them as their figures disappeared in the distance. "How wonderful it is to see their reconciliation!" She thought with joyful tears in her eyes.

The bike had been fixed to resemble a brand new one and the rusty patches were gone. When it stopped at the school gate, Tom pressed the bell on the front holder and a series of crisp sounds immediately flowed out.

"Are you ready for school?" He looked at Jack and smiled, his wrinkles squeezing together around his eyes.

"Yes. Definitely!" Jack confidently thumped his chest.

"Don't forget our agreement. It is alright to play basketball as a means of relax, but you have to concentrate on your study more than before!"

"Okay I know, I know! Take care when you go back home."

Tom beamed and patted Jack on the back with his rough hands.

Jack jogged through the gate and enter the campus under the gaze of his father. He was surprised to discover that his school, once a place he was extremely eager to escape from, seemed attractive for the first time in his eyes. The bright red national flag fluttered freely under the clear blue sky; some wild flowers were growing out of the earth and stretching their bodies satisfactorily on the lawn; a burst of his classmates' carefree laughter floated from the teaching building into Jack's ears and woke up the small deer in his heart.

On the way to his classroom, Jack walked pass the familiar basketball court. He intuitively threw the ball he had carried in his arms towards the hoop. The basketball drew a perfect arc in midair and reflected a ray of warm spring sunlight on his face. He looked up at the flying ball and smiled sincerely.





# My Father's Story

By Yuki Wang G12 Theta

I was born in White Elephant, a small town in the south of Zhejiang. An elephant-like mountain lies in the town, with a long elephant trunk zigzagged on the back. All my neighbors own the name Wang, and so do I.

My grandpa has five brothers. The oldest one was a carpenter who lives on grinding scissors with his third brother. My grandpa was the second son in the family, who initially imported seafood, and then set up a stall to sell cigarettes in the market where crowds jostled in the chaos. The fourth brother and the fifth brother worked in the company, who was praiseworthy for the other people, but I never met them before. My grandpa has four sons and two daughters, and my dad was the oldest. One of my uncles followed my grandpa to become a carpenter, and another one was enrolled in the army, while the smallest one was still in middle school. This is my big family.

My dad was always busy making a living. But he loves reading, which gives him a distinctive disposition compared to neighbors. He paid attention to my education and bought booklets called "Xiao Ren Shu". Some Chinese legends like Liu Bei and his two brothers, little Si Maguang saved his friends by smashing a jar, and how Zhu Geliang borrowed the arrows from enemies. These stories taught me and my sister the power of wisdom which gave me so much inspiration when I was a kid. In recent days, education professionals encourage parents to read bedtime stories for their children, while my father did this thirty years ago.

At home, we raised piggies, ducks, and chickens. Chickens were hatched from hens. We did not buy chickens since they were quite expensive. We loved to chase those little chickens and to see them waving short legs and chirps. We would pretend that we were one of them when hens led them to seek food. We would feed them with dried rice husks. In the morning, we rushed into hencoops to get some eggs without brushing our teeth and washing faces. The eggs were cute, small, warm with the body temperature of hens.

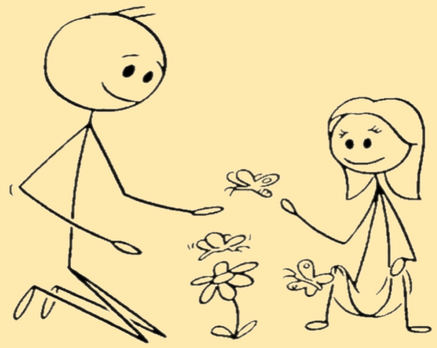
In those days, if oxen and mules were not available, our shoulders with a pole were the most common means of transportation. The sweet potatoes transported by my dad were made into sweet potato rice, which became the most unforgettable food in our childhood. Food was no doubt precious at that time. We hated people who wasted food. We bathed them under the sunshine with extra sweet potatoes, turning them into pieces of dried sweet potatoes. These are our most common hunger snacks.

I often competed with my sister to see who can finish planting a row of crops first. Each with their own home, my father and mother dug a row of holes in the field symmetrically, only a little larger than an egg. My sister and I took the grass seeds dipped in the mud, no more or less, a handful just right, and threw them into the hole.

We covered the soil with the turned earth, and we planted a bunch of grass. I don't remember winning or losing for I don't care. I can always remember the smell of grass mixed with mud athat time. The air was dried and warm, imbued with laughter and happiness. I remember the shape of seeds of grass, like little dessert rings, covered in soft burrs that are hard to pull off when you throw them into your hair.

We love to grow grass. One of the reasons is that it is not difficult or demanding to grow grass. It doesn't matter if you can't grow grass in a few pits once in a while, because when the grass grows, it's time to plow. The grass is just fertilizer for the earth. There is often a surplus of grass seeds, where the muddy grass seeds become our "war" the best weapon. The best target of the attack is the hair, of course. You will never want your hair ever to touch this kind of grass seed because you will never pull it off. My sister is just silly. She loves long hair without noticing it is her weakness. In the end, she had to give in and beg for mercy. So every time after planting grass, my mother had to squat for an hour at the quay to help us clean the grass seeds and mud in our hair.

I cannot forget the children's drama class that my sister and I started. At that time, in the countryside, whenever there was a Chinese New Year or a wedding, the troupe would come to the village to set up a stage to perform operas, the social operas (She Xi) written by Lu Xun. Usually, Shaoxing opera and Beijing Opera took place, but also Huangmei Opera was also not a bad idea. Influenced by social opera (She Xi), many Peking Opera and Shaoxing opera fans have appeared in the villagers. My father is a fan of Peking Opera. If you can ever go to Shanghai to buy phonograph records, mostly you will get the records of Beijing Opera and Shaoxing opera. Influenced by my father, my mother, who had never studied in school, also liked Shaoxing opera. Every time I went to the village to set up a stage to sing social opera, my mother let me and my sister carry the stool to grab a place early. In the first few years, it was still big enough to take our time. Later, crowds rushed to see the opera, pushing the village committee to build temporary stands on the low wall next to it, and in the end, the temporary stands had to be snapped up for money.



No doubt, children were enthralled by social drama, where they danced with knives and guns everywhere. I and my sister were no exception. Grandpa and Uncle Were carpenters, so I begged them to build wooden knives and spear guns. At first, we imitated the actor dozen kill. But we were greedy. Knives and guns, and costumes, the bedsheets, pillowcases, and coverings came in handy. The stage does not need to be built, there are already-made—— the ancestral house has a north-south transparent hall, next to the hidden wing is backstage and dressing room and dressing room. Thus, a children's stage troupe was established.

At first, we only had three to four people. But we lobbied several passersby to join us. Soon our trope grew up. There are two kinds of plays and scenes on which we are most played. One is when the emperor comes to court, full of ministers that we called Da Chen in Chinese. In this scene, the emperor would always berate the traitor and drag him off to be beheaded. The second kind is the scholar who attended the Keju (an examination system in ancient times) and won the championship. He was valued by emperors and then returned home, married a beautiful girl for his wife.

The lines are also very fixed; there is a general "Long live the emperor, long live the emperor!" with an august response "Ai Qing (the title emperor called his subject) please stand up." Or "Bold traitor, you have no choice but, to tell the truth!"; or "Worship heaven and earth, worship two Gaotang, husband, and wife make a courtesy call to each other (a ceremony during the wedding night in ancient China)" and so on. These are famous scenes that we learned from the social drama (She Xi), but the actors often need to rotate, otherwise, those who played treacherous officials would get annoyed. I remember one time when two bored adults stopped to watch our performance for a long time. We were so excited and played the best performance we had ever made.





# THE HERO

## Written by Joanna from G11 Delta


He weaved through the crowd, rub bing off people's shoulders and whizzing past their hair. "So busy here!"

When Liang waved with patches of paddy fields in the muggy wind, no one was in his sight – only himself, trying hard on the spinning kick, his leg swiftly streaking over across the image of the setting sun. Mom's yell would traverse the ocean of plants deep at his waist, "Liang, back for dinner!" He would find it hard to tear himself away from the sunset glow that stretched to the far unknown. But he would still rest down and shake the sweat off his head, his stomach growling with hunger. Mom always handed him a bowl filled with rice. She seemed to only cease to sweat when swallowing a few mouthfuls of rice every evening.

Liang had been traveling for more than an hour in the steaming heat of August. He squeezed out of the crowd and decided to find a place to eat. An electric current of excitement surged through his inner engine – He was going to eat! Alone! For the first time in years! It then purred with anticipation – He was going to study and eat with his unmet friends right away! He couldn't help himself striding bouncily.

When that call arrived in June, Liang knew he was about to write a brand-new chapter of his life: an adventurous, promising, and heroic one. With a humming bird thumping wings in his upper chest, Liang was expecting Mom to get home and drop her shoulder pole off. She hugged him with ecstasy and murmured unclear congrats, his neck moistened by her arms around. The offer was wrinkled by her fingertips. Liang never saw her clutching at anything else as such tightly, not even the food coupons she brought back every month. Six weeks later, Liang waved at Mom to say goodbye and leaped away. "Slow down and take care! Liang!" her voice echoed behind. At the moment he hopped out the gate, he felt like he never flew so close to that sun. Liang was the hero in his Junior High being directly recommended to the best Senior High in the county, and now was the time to set off to his new school. "Here I come," his eyes glistening, he was ready to embrace the light.

Here was the downtown in Lixian County, Hunan Province. People flowed in and different types mixed, begging for a job and perching at the edge of the area. The gray granules on the cement pavement, the pleasant mature fruit aroma from the inclined stands, the hustle and bustle as a queue of bikes clanged their way... Lixian County still had no public transportation but a mere railway line running across the area in 1990, while this was enough to amaze Liang. "People are such clever designers!" Liang exclaimed and skipped across the steel, "someday I'll be rich, and I'll take on that flashing machine."

Delighted and motivated, he habitually punched the air.

"Hey, I bet you don't know the true secret of Shaolin Temple."

The voice had a husky drawl, which dragged Liang to turn to his patted shoulder. He saw a 40-year-old man, with the appearance of one who had learned the look of confidence as a survival skill. The black linen short-sleeve shirt suited his tall stature perfectly, adding up his decency as if he was raised in an urban family.

The man was weird. But – "Shaolin Temple"? Liang paused, perplexed but curious.

"Sorry for my discourtesy," the man followed up, suppressing the instinct to tremble the words. His eyes quickly ran over Liang and finally landed on his tattered mustard backpack. "I was excited because I eventually discovered a talent," the words were slowly intoned as the cords of muscle knotting on his neck vibrated, "not every young boy is suited to dig into kungfu, but you are."

The man's calmness winded up a wisp of awe around him. Liang continued his way, recollecting how he and his buddies squeezed together in a low flat-roofed house beside his Junior High, the hard wooden bench warmed under them. They looked up intently and cheered or screamed now and then for the heroes on the big movie screen, until the adults popped in to interrupt this kungfu-movie party. No one didn't want to be a kungfu master.

"I know fellows mastered at kungfu," the man stroked Liang's shoulder, "we are seeking top seeds to pass on our kungfu. Why don't you just come and see?" The man's eyes were kind while solemn as if he was carrying out a task that could determine the world's future.

Liang was flattered. Hearing "kungfu", he filled up his mind with imaginary figures that all resembled Jue Yuan, the hero in the movie "Shaolin" who was wise and bold to found and renown Shaolin Temple all over the country. The swift spinning kick was his ultimate kill, and Liang was obsessed with it.

"The training spot was just over there," the man leaned to the left, whereas still anchored his eyes on Liang's backpack.

"Boy, I hope I can help you realize your true talent."

"Sir, I'm penniless." Liang's voice was unsure, signaling his inner struggle.

"So what?" asked the man, a hesitation flickering across his eyes. "We are not for earning money. Shaolin Temple sent us here." Liang gazed at him with a look of relief. The man didn't allow the silence to last long, "Are you on the road to school?"

"Yes. Tomorrow's the first day." The man's well-bred manners increased his venerability, urging Liang to show full respect.

"Lots of students are coming back to school now. I and my fellows have been observing on the street for days." There was something in the way the man was talking that gave him away, his keenness to seek information. "Did you have your dinner?"

"I am planning to."

"Ah, OK..." The man's words were dilatory as if he was pondering something over. He glanced at Liang's backpack again. "So... Are you coming?"

The clamorous city, the stately man in black, the imagined hero Liang in the near future... He felt like these were all exerting a kind of magnetic pull. Liang gulped down the saliva, and finally came to a halt.

"Mom, I have tried," he whispered, the tears plopping down onto his trousers, his inner angel imploring for help. Liang has tried. When he found out there was solely a deserted space devoid of matter in front of him, his face was washed blank and every muscle of his body froze in an instant. Seconds later, he dashed to the street with robotic movements and went hunting aimlessly for the evil gang and the backpack he laid aside for freeing himself to show off his spinning kick.

Of course, he could find nothing in the sea of faces. It wasn't until the realization of which his food coupons were also in the backpack that his overwhelming frustration was built. He sat down by a bush. The lively scarlet flowers lacerated his eyes;





the refreshing light breeze choked him. It was the food coupons, worth 90-kg rice, for his whole semester's meals. Mom had flattened it the night before his departure when they were eating rice, her passing motion being slow with a sense of formality, trust, and expectation. Liang was further ridiculed and shamed by the memory.

Liang thought he might explode. He wanted to shout, throw a tantrum, and beat his hands on the ground like a toddler. He wanted to vent, let the fury out, by bombarding every passerby with a volley of questions like a hysterical woman. Liang was confused. He couldn't accept the bloody truth that he was tricked like a fool, or understand why an innocent and poor young boy like himself would be the target of frauds and the source of exploitation. "Mom, now I just don't know." Eyes wet and downcast, brows knotted, mouth buckling, he tried to figure the thing out. Liang was also fearful. He felt like his bones were out of strength to keep supporting his original passionate vision; instead, observing everything new and afraid of any dangerous unknowns, he thought he was sinking into the depths of loneliness and humiliation.

As night closed in, Liang's stomach growled. He squirmed to try to silence this rumbling, but he couldn't help himself thinking about Mom's bowl filled with rice and salivating at it. He stirred himself to move rather than allowing himself to starve to death at this corner, where nobody would care.

His pocket was empty without even a cent to eat. So he walked, once again, in this downtown which now sounded suffocating to him, his blood drained from the skin. With every step he took forward, Liang seemed to have moved nowhere.

He never thought to open his life of Senior High like this, borrowing 5 cents from a classmate he had just met minutes ago, embarrassed. That night, he slept with guilt and anxiety welling up in his chest.

Liang had no choice but to walk back home to ask for help the next day. His own vivid walk had become a shuffle. Even the paddy fields could not mollify him as it used to do.

At the moment he saw Mom, he couldn't refrain himself from falling into her arms and bursting into wracking sobs, more violent than any gale.

"Mom, I'm sorry," he cried.

"I'm sorry that I was a fool," he developed an even thicker flow of tears, "that I lost all my food coupons."

"I'm sorry! I'm sorry mom..."

...

She was stunned, and exhaled. Then she clasped Liang even tighter.

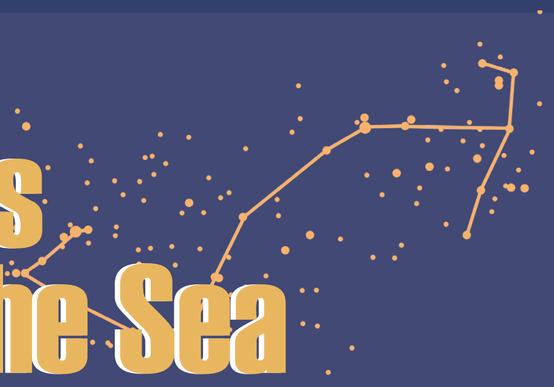
She stooped and scooped out the rice stored in the timeworn big jar laid aside the pots and pans, filling up the plastic woven bag unfolded inside the basket with several wooden strips poking out. She shouldered the pole attached to the baskets, the pole being burned under the searing sun all day long since he could remember things.

"Let's go."

Her hair lied like a second skin over her cheeks, heading the salty droplets to drip onto the rugged lanes. The cords pressed her palms, leaving red traces on the calluses. Her steps were small but steadfast, as if she had woven her center to the earth. Even though nearly 10-km road was waiting ahead, she seemed to be never worried but only proceeding one step by another. In that sweat her skin became more glowing, more beautiful, more heroic – Liang thought – than any heart could have imagined.

"Liang, you know what," struck by a twinkling of realization, he whispered to himself, "you should walk like this and live like this." Liang caught up and helped haul the baskets up. Not the spinning kick, it was his staid and solid walk that made Jue Yuan a true hero.

# When Stars Sink Into The Sea



## Written by Olivia from G12 Sigma

There is a sea named Tethys. It is the largest sea with unpredictable temper. There is a river named Ansata. It was the river of life that kept running all day and bred up the first civilization. Where the Ansata River meets the Tethys Sea, there is a city named Mersey. In City Mersey, there is the busiest harbor and the clearest sky. Boats with white sails go in and out one after another every day. Tethys Sea is the father. Ansata River is the mother. Thousands of Mersey's children leave their homes to the wide world every day through seas, without telling their parents when they will be back.

In City Mersey, there lived a girl named Estrella. Just like every child in Mersey, she was a born adventurer, never afraid of any unknown mysteries. Darkness, the monster for most kids, was her best friend. Only under the dark curtain of midnight could she communicate with stars, the most faithful companions in her childhood. Since three years old, she began to sit in the backyard to count stars every night. By the age of five, she had been able to identify the Summer Triangle, Big Dipper, and the Polaris. When growing older, she would stay up all night in freezing winds, only to get the best view of Leonid Meteor Shower. At school, she was always the top. Her bookshelf was filled with not only certificates of physics competitions and professional books about the universe, but also Biographies of real female astronomers such as Hypatia, Caroline Herschel, and Henrietta Swan Leavitt. Her classmates and teachers called her "our smartest little astronomer," believing that one day, the name of Estrella would be able to be juxtaposed with these immortal women.

Years passed, and Estrella was now 17 years old. She was the best physicist in her high school, graduating one year in advance with a perfect grade. She still remembered the night of graduation. It was a sunny June night; stars had never been so bright up in the sky. All classmates waved goodbye to each other and left only Dorian and her in the classroom.

Only Dorian and her were there—they had always been together in the process of growing up. Dorian was one year older and lived next door, whom she always regarded as her brother. When he suddenly turned around to face her directly, Estrella thought she had known what he would say next.

"Estrella, you know that all my families are sailors. After graduation, I'm going to sail away, from Ansata River to the center of Tethys Sea, just like all my ancestors did! Will you come with me? I mean, we can have a gap year, go traveling across the sea, and go back to university later. "

Estrella chuckled, "Sorry, Dorian, but I just can't wait to start on my first physics class in university to be one step closer as a true astronomer."

"You can still keep watching your stars. You know, stars are really important in sailing. You will be my navigator, and, and you can gain some knowledge outside class,"

"Astronomy is not all about watching stars at night. There are so many thick books and delicate equipment. I can't take them all on the boat. "

"If you insist, fine, but I still have one thing to ask for," Dorian took a deep breath, raised his eyes with hope, "Since the first day you come into our class, I have been---"

"Sorry again," Estrella frowned, her voice became serious, "I can't accept your love."

Dorian blushed, "how, how do you know?"

Estrella sighed. It was not the first time when she received such a confession of love, and it was not the first time when she refused boys without a slight hesitation. Since she entered middle school, she had determined that she would devote her whole life to the universe. Stars should be her only companions, and she was ready to bear the loneliness throughout the life.

She looked up at Dorian. Everyone in Mersey knew that Dorian came from a sailors' family. His father, grandfather, and great-grandfather were all grown up on boats. His uncle was buried under the sea, and his brother went away with waves five years ago. No one knew when exactly the family became tied to the ocean. Perhaps they were the first sailors who landed on the continent and set up City Mersey two hundred years ago. The only thing people were certain of was that they were the bravest boys. Their bones were made of rocks, and seawater ran through their blood. What Estrella liked most about Dorian, however, were his eyebrows, as wide as the wings of a seagull. With the wings of the seagull, he would be able to go through any storms.

"I am an astronomer, and you are a sailor. Our love should belong to something greater, such as the ocean and the universe."

There is an unwritten rule that every boy in Dorian's family should sail out of the harbor when he gets 18 years old. He would decide whether to return to Mersey or not after seeing the magnificent world on his own. Estrella looked into Dorian's eyes. Although they had known each other since childhood, she had never observed him so carefully in such a close distance. Starlight spilled through the window on his blonde hair and made it shine like the sun. His eyes were of marine blue. Estrella couldn't see anything but rough waves inside. Dorian was too bright for her. Her eyes were a mix of dark blue and purple, just like the color of the sky on quite a sunny night which was the best to observe stars. Will Dorian be patient enough to wait with her for a glimpse of a comet? Will she be brave enough to stand with Dorian when huge waves hit the deck? She didn't know.

"The ocean and the universe, such a remote distance. You can't ask a star to sink into the sea." Estrella whispered. She looked outside the window. Countless stars glimmered so high up in the sky that they seemed would never fall.

Dorian was an obstacle on Estrella's way to become a true astronomer, but he was not the only one, and there were obstacles that cannot be overcome by a single girl's power. After Estrella studied in university for just one year, a war broke out. If Estrella had not been so focused on her study of the universe, she would have noticed the signs of war earlier, since many of her classmates asked for leave and never came back again. But now, when the enemies broke into the city and declared their occupation, it was too late to get away easily. Gunfire tore the peaceful curtain of the night apart; the blaze of explosion took the place of the twinkle of stars. Blood dyed River Ansata red; the River of life now became the messenger of death, carrying countless souls of the sacrificed into the Sea Tethys. City Mersey cried for its children; even the wind seemed to be sobbing. Estrella escaped at such a night, only being able to carry away basic clothes and food. Her telescope and astronomy books were left in the city, shattered by the shell, and disappeared with smokes.

In the following years, Estrella hid in a small village inside a mountain. She lived a difficult time. Her father broke his leg on the run and soon passed away. Her mother was so depressed that she fell ill and died that winter because of the coldness. She was there, watching her father suffering from pain and her mother becoming weaker day by day, but she was at a loss of what to do. She could tell that villagers didn't welcome her, although she was not the only one who escaped from Mersey. Mr.

Harrison was a hunter; he hunted for the village, and they gave him firewood in return. Mrs. Vale was a baker; she cooked for the village, and they gave her medicine in return. But Estrella knew nothing, no one needed her to tell how stars moved, and no one would offer medicine when her father needed care, nor would they lend firewood when her mother shivered in the snow. In the morning, she worked in fields, learning to plant crops or cut firewood; at night, she looked up at the sky, only to find that stars had long been faded by the smoke of gunpowder. For the first time in her life, she found the study of the universe useless.

Hundreds of nights without the company of stars passed, long enough for her to forget most constellations' names. Along with stars, everything about Mersey, the busiest harbor with white sails, the Ansata River, and the Tethys Sea, were also buried deep in her memory. Estrella thought she would never go back to Mersey and die in the village like her parents, until one day the guerrilla came and brought the good news---they were winning the war, and Mersey would be recaptured in several days. However, what made Estrella most joyful was that she found Dorian in the guerrilla. After leaving Mersey for so many years, Dorian was the only one with whom she could share the memory and recall the past. The first night they met again was also a sunny June night, with stars shining above their heads, just like the night when they graduated from high school. They stayed up late, talking with each other after being apart for such a long time. Dorian told her that he joined the guerrilla soon after the war broke out and kept fighting around the country. Estrella told him how she escaped and hid in the village when Mersey was occupied. There was a long silence when they just stared at each other under the starlight, trying to figure out what each other had been through in these years, until Dorian broke off.

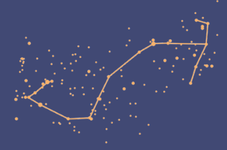
"I asked you this when we graduate from high school, and at that time, you said that an astronomer and a sailor shouldn't fall in love. But now I am no longer a sailor, and you aren't an astronomer anymore. Will you reconsider my request?"

It was the first time this night that they mentioned sailors and astronomers, seas and stars; Estrella couldn't tell if it is because these were their deepest regrets too sorrow to recall, or just dreams that had long been forgotten. She looked back into Dorian's eyes. His eyes were still as blue as the sea. But this time, she could no longer see the waves that could never be tamed; she saw reflection of the starry sky and herself.

So she smiled and nodded, "I'm glad to."

The war ended at last, and they returned to Mersey. Nothing seemed to be changed. The Ansata River and the Tethys Sea were still there, waiting for their children faithfully. The harbor that was destroyed during the war was rebuilt and soon became the busiest harbor in the world again. But everything seemed to be changed too. Estrella gave up the chance to reenter the university and further her study in astronomy because she had to find a job and earn enough money to support the family. She now worked as a physics teacher in middle school. In reunion with old classmates and teachers, they would still call her "our smartest little astronomer," but Estrella knew that her name would be forever took off from the list of outstanding female physicists. Dorian still worked at the harbor, but he only helped to carry cargos instead of sailing through the sea. They had two children after marriage and lived the rest of their life in peace.

Sometimes, Estrella, together with Dorian and their children, would walk along the beach at the harbor on sunny nights. On the horizon, it was hard to tell the sea from the sky. The sea was peaceful, mirroring countless stars on the curtain of night. Gentle waves flapped the bank from time to time, bringing diamonds of the sky to people's feet. The stars finally sunk into the sea.







# 美的多样性

Amarias Qiu G10 Theta

我作为一个新年代的青年，很难在人群中找到自己的位置，都容易被“飞来的沙子”挤满眼，而看不到自己真正的自己，我是否也有我独特的“美”呢？现在的人喜欢等等。他们以这些做为视力美，而我们从中却找不到“阿佛洛狄式的微笑”。

我家院子门口有几株玫瑰几棵梅花树，玫瑰娇艳而美丽，梅花在寒冬腊月散发着芬芳的香气，照亮了一片天地。

小区门口绿化带里也有几株野花，没有一株花是精心培育的，但他们都很美，没有玫瑰的浓妆艳抹，没有梅花的芬芳扑鼻，但是独立寒冬，以微博之力守护着一片土地。

小的时候，姥姥说过她的姥姥曾经缠过小脚，她在奶奶小的时候，曾今劝告奶奶也裹小脚。他骄傲地说“你爷爷当时就是因为我裹了小脚，才看上我的！要是你不过小脚的话，到时候没人要可别怪我！”奶奶对我说，他很庆幸他当时没有缠小脚，“那是旧时代的审美，对于现在的我们已经不适用了。”

美的定义随时随刻都在改变，古代人以胖为美，古代人以脚小为美，十几年前的人，以单纯，可爱，娇小为美，以面部线条圆润为美，现在人们以优美的气质线条，直角肩，以及诸如此类的很多标准来判断一个人是否好看，有魅力。

美丽的定义总是改变，与其盲目追求时尚，跟随潮流，不如脚踩实地，追求自己特别的美丽。单纯的美，唯有美的本质，完美的美，唯有一颗最真挚的心，整体的美，唯有同时代的脉搏一起跳动，才产生的这种独一无二；陶渊明看破黑暗，寄情山水，是一种恬静的美欧阳修远离官场，忧国忧民，是一种崇高的美！

世界之所以美，在于其美的多样，玫瑰鲜艳美丽，有娇艳的美，菊花芳香四溢，芬芳的美，野草虽平平无奇，但也有自己坚持平凡的美。

# 想写给你的一首诗

Writen By Myra

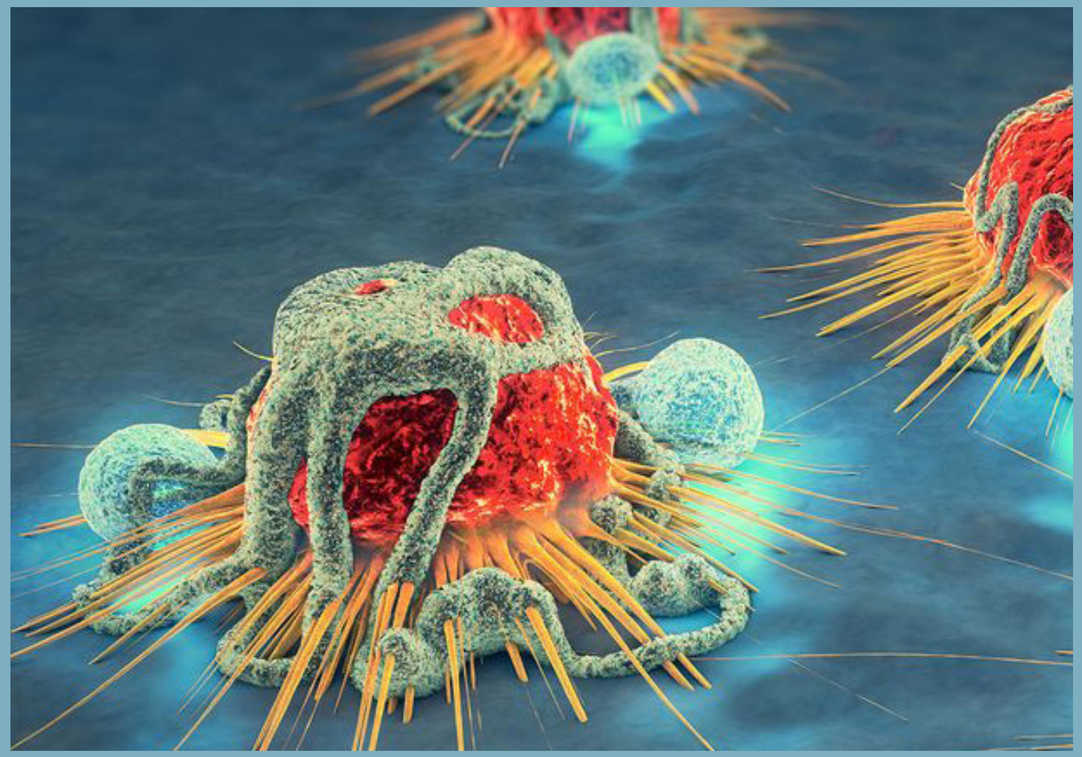
我想给你写一首诗
无关银河 和他的璀璨美丽
无关四月 和他的清香温暖
无关岁月 无关命运
无关那些悲伤 那些眼泪 那些忧愁

我想给你写一首诗
取芬芳的清风
为你编织最美的童话
用温暖的阳光
为你搭建最舒适的房屋
以飞扬的雪花
为你冲破时速的牢笼枷锁

我想站在江河旁为你写一首诗
取一捧水 轻轻泼在纸上
勾勒出我们相遇时的模样
我想立于高山之巅为你写一首诗
取一片红叶 一棵梧桐树 一张古琴
描绘我们未来的一生



# SCIENCE LAB



# The Effect of Glucocorticoid on Immune System and Clinical Use

written by:
Anita Eric Lisa Stephanie Sundy Yvette

WLSA SHANGHAI ACADEMY
(G11-12) 2 Zhengxi Road, Yangpu District, Shanghai, 200243
(G10 & A Level) 299 Tangji Road, Baoshan District, Shanghai, 200940



## 1. Abstract

Glucocorticoid is a type of corticosteroid hormone that can cause the skin to lose its protective function, blocks the production of T cells and various immune cells, and disrupts the circadian rhythm. However, in some diseases, it can be used to alleviate the disease and suppress the inflammation. There are three kinds of adrenal corticoid, and glucocorticoid is one of them, and the glucocorticoid includes functions of activating anti-inflammatory response, increasing the metabolic rate of protein and lipid, and regulating the hyperactive immune system. Cortisol is a glucocorticoid that can harm keratin mRNA expression. The skin synthesis can be disrupted by a decrease in keratin protein production. The hypothalamus-pituitary-adrenal axis in skin tissues produces more cortisol in stressful situations, resulting in a shortage of proteins to sustain skin. It acts by binding to glucocorticoid receptors and modulating the quantity of transcription of inflammatory-related mRNAs. However, there are some bad effects of the glucocorticoid that overdose of glucocorticoid will impair the immune system and result in infection worsening, hypokalemia, hypertension, diabetes, and other issues. Glucocorticoids are also potent regulators of inflammation. The inflammatory response is made up of a series of interconnected processes, the process can be divided into three phases. The first one is the alarm phase, in which “danger” signals cause the release of inflammatory mediators. The second one is the mobilization phase, in which leukocytes infiltrate the injured site. And the third one is the resolution phase, in which the tissue is cleared of cellular debris. And the process is really important for wound healing. Glucocorticoids have some impacts on this response that suppress the production of inflammatory mediators, inhibit the leukocyte migration and promote the phagocytosis of apoptotic cells. Therefore, the result is that glucocorticoids can indirectly reduce inflammatory factors to avoid a turbulent reaction, although sometimes inflammatory signals override the inhibitory effects of glucocorticoids. The result is that glucocorticoid will damage the thymus gland, which is inversely proportional to the growth of various immune cells. In addition, Cortisol affects circadian rhythm, and high-quality sleep can stimulate immune memory. Apart from the influence on the immune system, glucocorticoid has clinical uses. For glomerular diseases, glucocorticoids can help remedy some defective functions of the kidney to alleviate the disease. However, the side effects caused by glucocorticoid treatment may cause hypertension by regulating blood vessels. Glucocorticoid treatment also leads to osteoporosis by decreasing bone formation and increasing bone reabsorption. Therefore, co-medication is necessary when using glucocorticoid to treat a patient.

## 2. Introduction

The immune system is a network of biological processes that protect an organism from disease. It can recognize and get rid of antigen from outside of the human body. Immune surveillance is an ability that can find and clean the components which do not belong to the healthy body at any time such as mutated tumor cells, senescent cells. The immune system adjusts the environment inside through its immune tolerance and immune regulation. A healthy immune system is irreplaceable, but it can still lose functions in multiple ways such as continuing to take in junk food because

the food which is high in fat, high in sugar, and low in fiber “activated a large number of genes in the progenitor cells. The genes affected included those responsible for proliferation and maturation” (Technology Networks).

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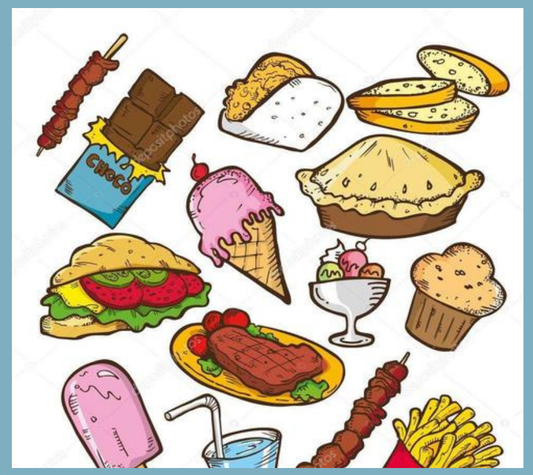
According to Prof. Dr. Joachim Schultze from the Life & Medical Sciences Institute at the University of Bonn and the German Center for Neurodegenerative Diseases Immune function, Immune function, uncoated lymphoid tissue, and immune cells such as lymphocytes and macrophages make up the immune system. Lymph tissue is the major component of both central and peripheral immune organs. The thymus and bone marrow are key immunological organs. B lymphocytes and T lymphocytes develop from hematopoietic stem cells, which multiply and specialize. The helper T cells, inflammatory T cells, and killer T cells are specialized in the thymus; the B cells and natural killer cells are differentiated in bone marrow (Weissman). B cells or T cells are sent from the central immune organs to the peripheral immune organs. In the central immune organs, lymphocytes can grow without being stimulated by antigen.

The spleen and lymph nodes are among the peripheral immunological organs, which are connected by a network of blood and lymphatic channels. The antigen-stimulated lymphocytes travel from central immune organs to peripheral immunological organs and multiply only when triggered by antigens, hence their proliferation is antigen-dependent. This is where the immune system responds.

Specific antigen receptors, which are crucial membrane structures for lymphocytes to bind and respond with antigens, are created on the surface of B and T cells in the thymus and bone marrow. T and B cells also possess the important ability to tolerate "own" antigens while responding to "non-self" antigens in the central immunological organs. The immune response is coordinated inside the lymphoid organs and they are not just waiting right there and waiting for the calls. James L. Gowans and his colleagues at the University of Oxford demonstrated in 1959 that immune cells circulate between ames L. Gowans and his colleagues at the University of Oxford demonstrated in 1959 that immune cells circulate between the bloodstream and the lymphoid organs. It passes into the high endothelial venule (HEV) that allows immune cells to enter lymphatic organs and lymphatic tissues from the circulation and get in the homing receptors. Some stay on lymph nodes andthe lymphoid organs. It passes into the high endothelial venule (HEV) that allows immune





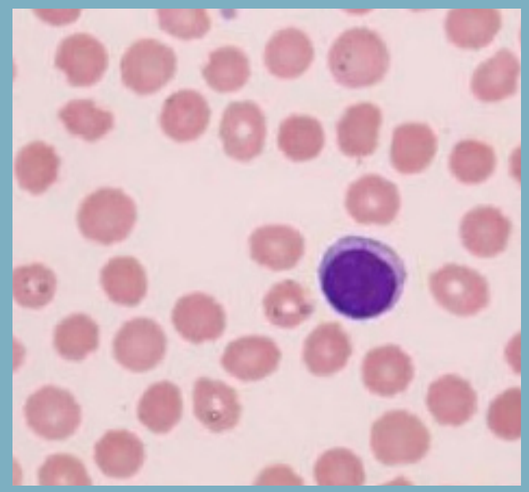


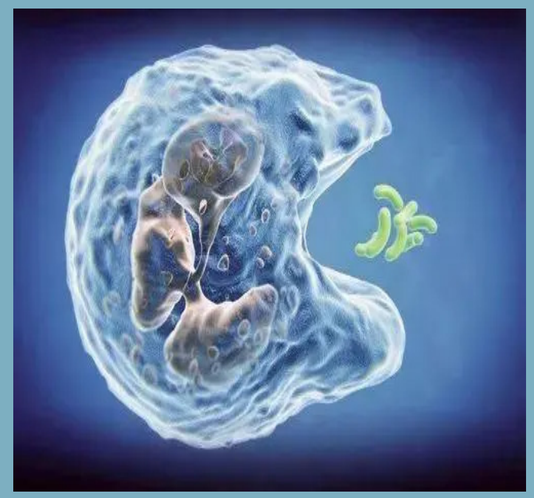
James L. Gowans and his colleagues at the University of Oxford demonstrated in 1959 that immune cells circulate between the bloodstream and the lymphoid organs. It passes into the high endothelial venule (HEV) that allows immune cells to enter lymphatic organs and lymphatic tissues from the circulation and get in the homing receptors. Some stay on lymph nodes and the other match the surface molecules by lymphoid organs. If the individual is attacked by antigens, cells such as macrophages will present the antigens to the T cell by using a molecule called major histocompatibility complex (MHC) for it to recognize. When the T cell receives the antigen, it divides into killer T cells and helper T cells. Killer T cells kill infected cells by triggering apoptosis or piercing the cell membrane. Helper T cells can stimulate B cells to react to the infection. As soon as the B cells are activated, they divide quickly into plasma B cells that disseminate antibodies that destroy the antigens, as well as into memory B cells (Weissman). If the antigen is beaten some times before, the speed of immune response by lymphocytes will be much higher than before. Dendritic cells are also important in memory function.

Phagocytes, such as neutrophils and macrophages, are members of non-specific immunity because they cannot remember previous met antigens. When the antigen arrives at the body tissues through the skin, the phagocytes will come out from the leaky blood vessel and perform their work. If there are remaining antigens that are not killed by phagocytes near the skin, they will be killed by phagocytes in the lymph node. Phagocytes kill the antigen in three steps. Firstly, the phagocyte touches the antigen; then, it devours the antigen; finally, the antigen will be decomposed by the lysosome inside the phagocyte.

Despite lymphocytes and phagocytes, there is also a cell called mast cell that is important in triggering an inflammatory response. Mast cells, often distributed near blood vessels, are tissue cells with strong basophilic granules. Antigens will induce the aggregation of FceRI receptor molecules on the surface of mast cells, as a result, stimulate the mast cells to release inflammatory mediators. Inflammation is a defensive response of the body against antigens. It makes the infected tissue swell. Too serious inflammatory responses may cause diseases. These diseases can be treated with some glucocorticoids.

Adreno cortical hormones are produced by the adrenal cortex. Mineralocorticoids, glucocorticoids, and androgens are three adreno cortical hormones ( “List of





Glucocorticoids + Uses, Types & Side Effects”). The glucocorticoids can increase blood sugar levels, increase the glycogen in the liver and muscle, increase the metabolic rate of protein and lipid, decrease the anabolic rate of protein and lipid, and increase the metabolic rate of water and electrolytes. It can also activate anti-inflammatory responses and regulate the hyperactive immune system (“Adrenal Glands.”). Glucocorticoids diffuse through cell membranes and bind to cytosolic glucocorticoid receptors, which are encoded by the nineexon gene NR3C1. The glucocorticoid receptor comprises three domains as a nuclear receptor: the first one is the amino terminal domain that interacts with co-regulators and the transcriptional machinery; the second one is the DNA binding domain; the third one is the ligand-binding domain. Between the DNA binding domain and the ligand-binding domain, there is a region that promotes receptor dimerization and nuclear translocation. Glucocorticoid receptors also have sites for post-translational modifications like phosphorylation and acetylation. This feature can facilitate many processes including nuclear import and export, gene regulation, and receptor degradation. After binding to the receptor, the glucocorticoids can influence the transcription of genes responsible for causing inflammation. When glucocorticoids bind to the receptor on the target cell, the complex of glucocorticoid and the receptor will enter the nucleus. There it will bind to either the glucocorticoid response element or the negative glucocorticoid response element of the promoter and change the amount of transcription. Through the control of message RNA, it finally affects the production of certain proteins that are crucial for regulating the inflammatory response. For example, certain cytokines have thefunction of activating neutrophils and macrophages, increasing the permeability of blood vessels and stimulating the reproduction and division of lymphocytes. The binding of a glucocorticoid to its receptor can repress the transcription of genes that code for relative cytokines. Therefore, glucocorticoid is often used to treat allergies, inflammation, and autoimmune diseases. It can be treated to an infected area or the whole body. Other functions of glucocorticoids include the stimulation of blood production by the marrow, the excitation of the central nervous system, and the stimulation of the secretion of pepsin.

Extracellular binding proteins and intracellular enzymes can locally regulate glucocorticoid activity. Corticosteroid binding globulin (CBG), which is important for the systemic distribution of glucocorticoids via the circulation and glucocorticoid delivery, renders cortisol inactive and leaves only ~5% of circulating corti sol in a bioactive form. For example, can cleave CBG can be cleaved by neutrophil elastase so that bioactive glucocorticoids at inflammatory sites can be liberated. Inflammatory signals such as TNF and IL1 β modulate the expression of 11 β HSD enzymes. Then they can change cellular sensitivity to endogenous glucocorticoids (Cain).

If the level of glucocorticoids is too high, problems will be caused. Due to the disorder of metabolism, a high level of glucocorticoids will cause centripetal obesity, thinning skin, acne, hairy, edema, hypokalemia, hypertension, diabetes. Too much glucocorticoid will also cause the induction or aggravation of infection, especially when the former disease already reduces the immunity. Osteoporosis, muscle atrophy, and slow wound healing are closely related to the promotion of protein decomposition by hormone, the inhibition of protein synthesis, and the increment in calcium and phosphorus excretion.Glucocorticoids are used to treat immune diseases. Although some off-doses of glucocorticoids and short course therapies of less than one week have very few harmful effects, more extended treatment may lead to severe side effects. Since glucocorticoids are widely used drugs, it is important to make patients aware of their side effects in case they ignore the prescription of their doctors and abuse the drug. To make proper use of systemic corticosteroids, a basic knowledge of pharmacology, clinical usage guidelines, and adverse reactions of these agents are essential. For this reason, we want to experiment to further understand the harm in the immune system of glucocorticoids and the influence they have on daily life.





# 3. Glucocorticoids and immune system

Glucocorticoid is the hormone released when people are stressed, and cortisol is one kind of it. Stress leads to symptoms including a decrease in immune response, hair loss, pain, etc. While sometimes cortisol is used to treat some diseases or after organ transplantation by suppressing the immune system of the patients. There’s a relationship between cortisol and the immune system, and the specific mechanisms and different aspects of the immune system are studied. The immune system includes three defense lines. Stress affects the first line of the immune system----the skin. Through hair analysis, externally composed chemicals can be traced. It is proved that high levels of cortisol harm skin by promoting skin structural breakdown. Specifically, cortisol in human damages hyaluronan and proteoglycans, which are two components of skin structure that “attract and retain moisture in the skin” (Thom). Cortisol affects keratinocytes directly. Keratinocytes are the most outer layer of cells of the skin. The skin has peripheral hypothalamus-pituitary-adrenal axes, and when cortisol releases, the hypothalamus-pituitary-adrenal axis can help to synthesize cortisol.

An increase in cortisol level when treating normal keratinocytes results in an obvious decrease in mRNA production of some keratin genes. A decrease in mRNA production means a decrease in keratin protein produced. Keratin proteins synthesize hair, skin, and nails, so cortisol can lead to damages to these places. Therefore, stress causes dry skin that lacks a barrier function induced by an increasing level of glucocorticoid (Choe).

As the second line of defense of the human immune system, the inflammatory response includes an alarm period, a mobilization period in which white blood cells infiltrate the injured site, and a digestive phase to remove cell debris from the tissue. There is a type of transmembrane protein, tissue-resident cells, used as risk sensors. One genre of transmembrane proteins, pattern recognition receptors (PRR), is activated by binding with pathogen-associated molecular patterns (PAMP). After activation of PRR, tissue macrophages, mast cells, and stromal cells would release inflammatory mediators (lipid agents, vasoactive amines, and cytokines).

It is extremely significant for the mobilization phase to possess the clearance of pathogens and cellular debris. Endothelial expression of E-selectin initiates the tethering of circulating neutrophils and monocytes to blood vessel walls, which causes the interaction between chemokine generated from inflammatory sites and chemokine receptors on leukocytes, finally leading to firm adhesion and leukocyte transmigration through the blood vessel wall (Kolaczkowska and Kubes). Subsequently, the leukocytes migrate to inflammatory sites. At this moment, leukocyte effusion is attenuated by prohibiting endothelial transcription of SELE (which encodes E-selectin), as well as the integrin ligands ICAM1 (intercellular adhesion molecule 1) and VCAM1 (vascular cell adhesion molecule 1) (Cronstein, et al.). The leukocyte migration is also curbed by some chemokines and chemoattractants like IL-8 and CC-chemokine ligands which are downregulated by the glucocorticoids (Ishmael, et al.). In addition, glucocorticoid-mediated induction of annexin A1 also hinders leukocyte recruitment (Perretti and Flower). In experimental autoimmune encephalomyelitis (an animal model of multiple sclerosis), glucocorticoids can inhibit the infiltration of T cells into the central nervous system (W ü st, et

# 4. Glucocorticoid and clinical

Glomerular disease is kidney disease. The pathogens affect glomeruli, which function as the filters of the kidney. When the blood flow through the capillaries of the glomeruli, water, some smaller solutes, and some plasma proteins enter the nephrons (kidney’s functional unit) to form urine. A common glomerular disease is idiopathic nephrotic syndrome, which is considered as a result of “immune dysregulation, systemic circulating factors, or inherited structural abnormalities of the podocyte” (Noone). Glucocorticoid, a hormone that can suppress the immune response, is used to treat the abnormality of the immune system. For some patients, it is supported that idiopathic nephrotic syndrome can be caused by T cell disorder, which further causes problems in podocytes (Zhang et al.). Podocytes compose an outer membrane on glomerular capillaries, which plays a role in filtration. Glucocorticoid is used to fix podocytes’ functions since there are glucocorticoid receptors on podocytes. Glucocorticoids can either regulate gene expressions of a particular cell or let the cells be prepared for “glucocorticoid-induced genomic changes” (Ponticelli and Locatelli). Therefore, glucocorticoid therapy in some glomerular diseases can compensate the immune dysregulation within a period. Glucocorticoid and hypertension Glucocorticoid is a kind of drug that is widely used in the treatment of neoplastic, rheumatological, immunological, and other disease processes (Baid S, Nieman LK). However, as with any potent medication, they are not without side effects. Practitioners should be aware that corticosteroid therapy could exacerbate a preexisting condition or present a new medical condition. Knowledge of the clinical implications of prescribing these agents is critical. For proper use of systemic corticosteroids, a basic knowledge of pharmacology, clinical usage guidelines, and adverse reactions of these agents are essential. Recent research had found that glucocorticoids cause hypertension through several mechanisms: their intrinsic mineralocorticoid activity through activation of the reninangiotensin system, by enhancing vasoactive substances, and by causing suppression of vasodilatory systems. The glucocorticoids are capable of inducing sustained elevations of blood pressure in both humans and animal models because it is entirely independent of the mineralocorticoid receptor (De Wachter E). Despite a great deal of basic scientific researchand clinical experience, the mechanism of steroid-induced hypertension remains unclear. The scientists suggest that using calcium channel blockers or relaxants and use glucocorticoid administration only if hypertension persists or worsens. A significant proportion of patients do not achieve complete cures after surgical treatment. Understanding the pathophysiology of hypertension is crucial for deciding on pharmacological agents (Goodwin).

Osteoporosis is the disease in that bones become brittle and weak, and a fracture is easily caused. Glucocorticoid reduces bone formation by regulating proteins in transduction that accelerates the differentiation of adipocytes more, which leads to a decreased formation of osteoblasts (bone cells) and increased osteoblasts apoptosis. By the way, inflammatory reaction stimulates inflammatory factors that result in more bone loss. Although glucocorticoid treatment can suppress inflammation, the relapse of the disease will still lead to an increase in bone reabsorption. Therefore, glucocorticoid treatment is mixed with other medicines like drugs that decrease the risk of fracture. What’s more, different people’s conditions determine the effectiveness of glucocorticoid treatment and the restoration of disease (Compston).

# 5. Conclusion

Glucocorticoid brings both negative and positive influences to human health. Glucocorticoid influences all defense lines of the immune system. It broke down proteins used to synthesis hair, skin, and nail. As an anti-inflammatory hormone, it can suppress inflammation to treat wounds. Glucocorticoids can also disturb immune responses initiated by sleep. The benefits of glucocorticoids include a counterbalance of pro-inflammatory hormones to prevent violent reactions caused by immune cells, and it can also treat immune diseases. An either too high or too low level of old should take part in physical exercise. Sub-health has become a typical word to describe the general health condition of white-collar workers nowadays. Indeed, high-stress lifestyles are a major cause of such phenomena as insomnia, hair loss, and its detrimental effect on the immune system. Stress-induced cortisol is one of the most common causes of current people’s sub-health. To avoid too much glucocorticoid release, people should have a regular living style to ensure that circadian rhythm works well, which helps improve the immune response (Besedovsky et al.). People should also be careful since injuries stimulate cortisol secretion, as shown in the study about mice’s brain injury (Dong et al.). Having diets regularly is also important since hunger contributes to an increase in cortisol levels in the blood (Hwang et al.). Interestingly, Mox treatment can help lower the cortisol level in the blood. The number of T cells and B cells increases to a normal level in stressful mice while cortisol level decreases in the blood after the Mox treatment (Hwang et al.).

Glucocorticoid is used with a mixture of different medications. Its main function is to regulate expressions of particular proteins to affect needed transduction in cells. It’s usually safe for most people to take glucocorticoids for

a little while, but using them for a long time can cause health problems, including high blood pressure, diabetes, osteoporosis, etc. (Souverein et al). Further researches are needed to apply glucocorticoid therapy more widely, and side effects need to be avoided in future therapies.

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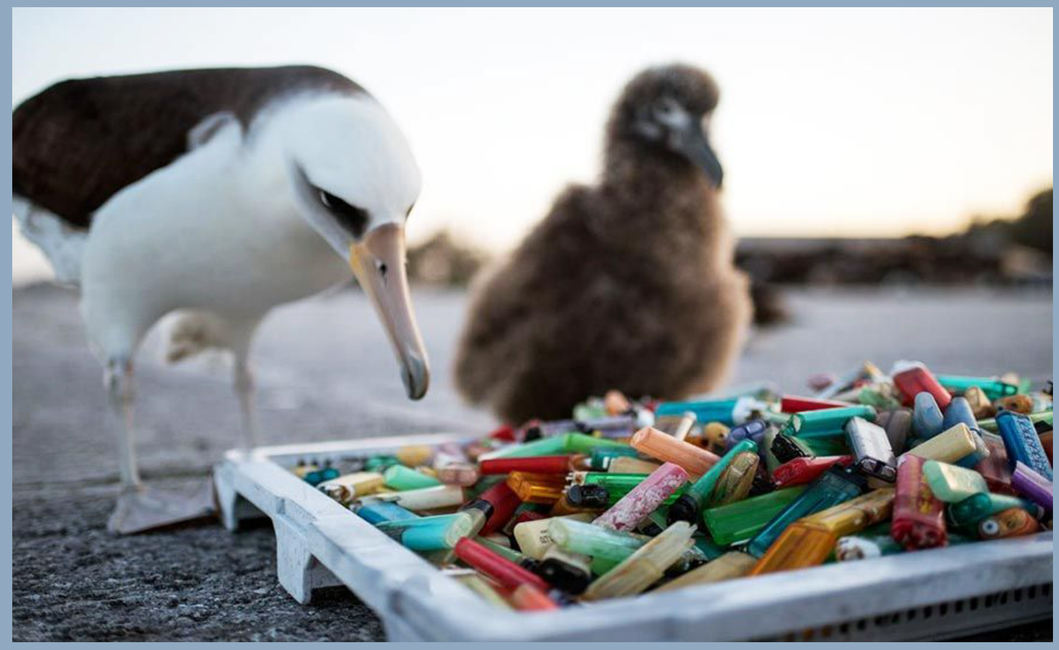


# The Effects of Plastic Particle Ingestion on Seabirds

**Written By:**
**Stephen Cheng, Michael Wu, Jenny Zhao, Cecilia Tang, Eileen Yao, Jenny Zhu**

# ABSTRACT

The harm of plastic particles to seabirds is manifested in behavior changes, physical damages, and chemical intoxication, and there are individual differences due to different eating and foraging behavior, presented by albatrosses, sea swallows, and seagulls. Many governments have taken action from the upstream level to address marine plastic pollution by emphasizing the prevention of future plastic pollution, which often has two limitations: the current problems cannot be solved, and there are no different sensitivities to different species of seabirds, so we call on governments to pay attention to existing marine plastic treatment and specific policies for seabirds. And we propose better plastics' degradability and raw materials for future preventions.

# 1. Introduction

Plastic, a word that originally meant "pliable and easily shaped," is now used to describe a category of material polymers which we used extensively in our daily life as a form of tools (Science History Institute). They are sometimes synthesized with cellulose extracted from cell walls in plant cells, but most of them are made from carbon atoms provided by fossil fuels such as petroleum (Science History Institute). The carbons in the plastics usually arrange in repetitive orders and form very long chains that are, in most cases, longer than any other inartificial polymers found in nature (Science History Institute). The patterns and length of the plastic polymers allow the plastics to be particularly robust, lightweight, and flexible, making them the most competitive material in our product industry. But it is those traits that make them especially useful are at the same time rendering them the culprits of our environmental crisis. The flexibility, the pliability, and its polyethylene terephthalate structures make them nearly impossible to decompose. When they are disposed into the ocean, time cannot wash them away (Rodriguez). Some of them will float on the sea surface, while another large portion will be carried by the tide ashore. Since plastic disposals are continuously increasing worldwide, they are becoming one of the biggest threats to the marine ecosystem. Seabirds, in particular, feed on prey located on the ocean surface and the shores of their nearby lands. Research papers are compiled in this article explaining the role of plastic bags in the seabird's population. Governmental interventions are generally discussed and specifically studied in America and France, based on which we propose suggestions for future methods.

# 2. Resources of Plastic Particle Ingestion

Plastic, as a non-biodegradable material, presents as a problem floating in the marine environment because it can only be slowly degraded by exposure to constant ultraviolet radiation (Marie Y. Azzarello & Edward S. Van Vleet). Plastic is combined with anti-oxidants and ultraviolet radiation to extend its service life, which presents increasing threats to the marine environment (Marie Y. Azzarello & Edward S. Van Vleet). As the demand and persistence of plastic increases, the impact of the plastic particles on seabirds inhabiting the marine environment will also increase correspondingly (Marie Y. Azzarello & Edward S. Van Vleet). The widespread accumulation of plastic particles in the marine environment has caused seabirds, especially Procellariforms, to reduce their fitness, growth rate, and foraging capabilities from either direct ingestion of plastic particles or indirect ingestion preys that contain plastic particles by bioaccumulation (Marie Y. Azzarello).

## 2.1 Direct Ingestion of Plastic

The seabirds can ingest plastic particles directly by mistaking small plastic particles such as bottle caps for predation. The plastic particles that have the color of white, light brown, and red often are similar to the planktonic larvae of many crustaceans, which usually causes several of them to ingest the plastic particles (Marie Y. Azzarello & Edward S. Van Vleet). Seabirds that feed mainly on crustaceans or cephalopods are generally more likely to directly ingesting plastics than piscivores since they often can't distinguish plastic particles from their food source.

## 2.2 Foods Contain Plastic

The plastic particles can also be transferred through the food web. Through bioaccumulation and biomagnification, plastic particles are accumulated in the consumers, and the higher tropic level consumers ingest more (Wengfeng Wang). More than 690 aquatic species ingest plastic particles (Provencher et al., 2017). As reported in the North Pacific Central Gyre, tiny plastic particles were found in approximately one-third of all fish caught, which contained an average of six plastic pieces and 1-2.79mm as the size of plastic pieces that are most frequently ingested (Stephanie L. Wright). In this study, most fishes caught belong to the Myctophidae, which prey on plankton near the surface at night. (Stephanie L. Wright). From consuming plankton that ate plastic particles, the plastic particles were transferred passively to fishes. Since the Myctophidae are preyed on by seabirds, through bioaccumulation, seabirds are also likely to ingest plastic particles by preying upon the Myctophidae fishes. Therefore, seabirds that feed mainly on fishes have a high probability of ingesting plastic from feeding on prey that previously intakes plastic particles. They would consume large amounts by biomagnification. Through the spread in the food web, plastic particles caused a series of harms in each tropic level. At the start of the food web, exposure to plastic particles could significantly reduce the growth of primary aquatic producers, including microalgae and phytoplankton. Once the consumers ingested plastic particles in the sea, they may be harmed with reduced body weight, damaged digestive system and reproductive system, and growth inhibition (Wenfeng Wang).

# 3. Effects of Ingestion of Plastic Particles

Among the abundant species that inhabit and feed in the marine system, seabirds are exceptionally vulnerable to ingesting marine plastic pollutions (Provencher et al.) Most of the seabird species, except for the few gulls that can sometimes regurgitate indigestible items such as plastic particles, only spit out substances when they are in fear or feed their chicks. This can lead to a huge increase in the chance that the particles will stay inside the bird's stomach.

Plastic particles would negatively affect seabirds' foraging behaviors.

According to the research conducted by Ryan, in which he used chicken to investigate consuming plastics' effects, the ingestion of plastic particles is responsible for chicken's decreasing meal sizes and slower growth rate. The primary reason is that the plastic particles in the stomach occupy its capacity and decrease the feeding stimuli, which reduces the foraging efficiency of chickens and, therefore, lowers the growth rate (Ryan).

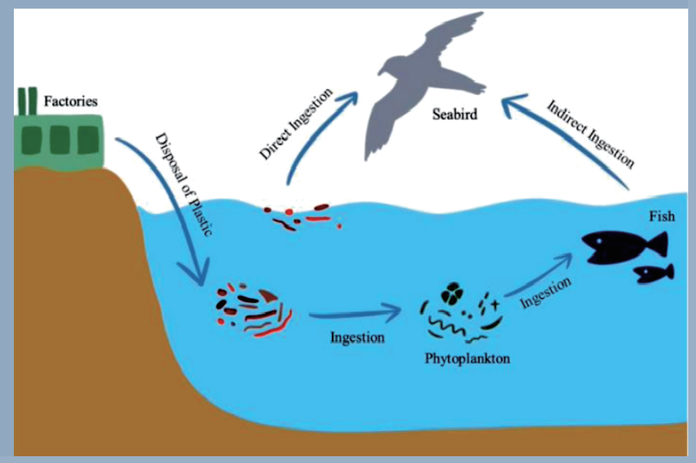



Fig. 1 Resources of seabirds' plastic particles ingestion

Considering the similar morphological structure between chicken and seabirds (Ryan), it is safe to conclude ingestion of plastic pellets impairs seabirds feeding behaviors and growth.

Plastic particles would cause physical damages to seabirds. According to the research by Jan A. van Franeker and Kara Lavender Law in 2012, seabirds, such as the fulmar petrel, even in the rare circumstances that they do spit, only spit out materials in their first stomach. Meanwhile, substances in their second stomach (gizzard) are kept intact. Only spitting out substances in the first stomach is not enough for them to clean up all the plastic particles, so then the particles will travel through the narrow passage connecting the stomach and the gizzard. Eventually, when they are worn down and broken into fragments, they will be able to travel again into their intestines (Van Franeker and Law). Next in their journey in the birds' bodies, when they're in the shape and size to be labeled micro, they will be transported, just like any other substances in any other animals, out of the birds' intestines and enter the birds' bloodstream. There, research had observed signs of significantly distinguishable physical damage. Inflammation, for example, is caused by them rubbing the interior walls of the organs (Thompson). When organs are inflamed, an organism might feel pain, difficulty breathing, high blood pressure, or experience organ failure, which might be lethal in the long term (Whittier Hospital Medical Center). Another symptom caused by the influx of plastic particles into the bloodstream and organs is that it can result in blockage in blood vessels or internal injury (Azzarello and Van Vleet).

Plastic particles can further lead to chemical harm. In a 1988 study on polychlorinated biphenyl (PCB), evidence had found that supports the hypothesis in which seabirds can absorb chemicals from plastic particles, meaning that they will be susceptible to damages other than those created physically (Ryan). Toxic chemicals leached by ingesting microplastic particles include a harmful endocrine disruptor called the hormone-disrupting bisphenol A (BPA), a building block for polycarbonate plastics used mainly in food and beverage storage (Rubin). En masse, BPA will disrupt the natural balance of the organism's hormone system and induce estrogenic effects when binding to estrogen receptors. Specifically for birds, BPA will be responsible for immune toxicity, hinder growth and reproduction by causing atrophic testes and ovaries (Ohore and Zhang).

Ingestion of the plastic particle can cause behavioral, physical, and chemical damages— however, the extent to which will vary among species of seabirds. Therefore, we investigate three kinds of seabirds' susceptibilities specifically.

## 3.1 Albatrosses

Plastic particles consumed by most species of seabirds could cause huge harm and fatal diseases. Although albatrosses can regurgitate, which could reduce the negative impact of plastic particles, the plastic particles can still bring severe adverse effects. Two specific negative impacts of plastic particles on albatrosses are addressed.

Firstly, albatrosses are more likely to consume plastic particles and be harmed worse because of their foraging diet. Laysan albatrosses can assess resources on large scales, but unfortunately, the core areas where albatrosses forage contain substantial amounts of floating debris. In the chick-rearing season in Laysan albatross, the highest concentrations of marine plastic debris occur when NPTZ moves southward due to changes in the wind.

Secondly, plastic particles cause more diseases and deaths in albatross chicks than adult albatrosses by affecting their digestion and causing severe diseases. In the 1982 survey, 90% of Laysan Albatross chicks contained plastic, toys, bottle caps, or lighters in their upper digestive tract. The researchers also examined four adult albatrosses, and two of which contained plastic. This indicates that most Albatross chicks cannot get the plastic particles they consumed out of their body. In July 1983, 24 albatross chicks were examined for plastic, and plastic debris was weighed and measured.

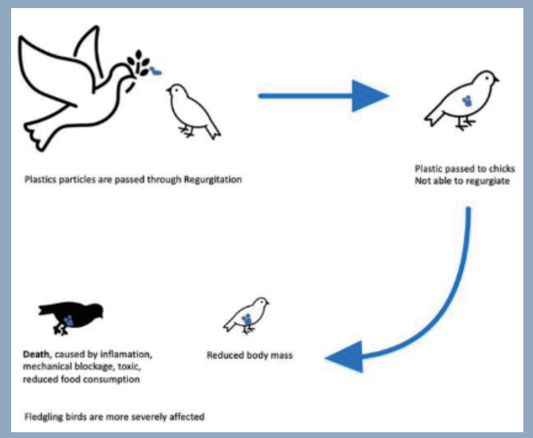



Fig. 2 Consequences of feeding albatross chicks through adults' regurgitation





The researchers measured the amount of plastic in the proventriculus of 19 live chicks and five dead ones collected for the study. Seven of the 19 live chicks (89%) contained plastic, and four of the five dead chicks (80%) contained plastic.

The average weight and volume of live chicks were 35.7g and 39.3cc, respectively, while the average weight and volume of dead ones were 76.6g and 85cc. (D.M,et.al) The indigestible plastic particles in the dead chick's body may contribute to their death. The results show that plastic fragments seem to be the direct cause of severe chronic inflammatory lesions in the muscular and mucosal lamina propria of the birds, and plastic debris may have caused minor chronic ulcerative lesions. (D.M,et.al) Furthermore, besides vulnerability to plastic particles, albatross are extra likely to consume plastic particles. Since small pieces are common in the albatross colonies as parts of castings regurgitated by resident albatrosses, adults probably transfer the bulk of the plastic to their chicks when feeding them by regurgitation. Therefore, indigestible materials that the adults have collected and regurgitated throughout the breeding season lead to many plastics in the nestlings. The plastic particles may obstruct the upper digestive tract, preventing food from passing through the digestive system. The sub-lethal effects of plastic impaction and minor ulcerations may reduce chicks' disease resistance and survival after emergence (D.M. et al.). Moreover, plastic particles may indirectly affect survival during the nestling period and possibly after fledging. Reduced fledging weight may reduce the survival of chicks after they depart from the nesting colony. (P. R. SIEVERT and L. SILEO)

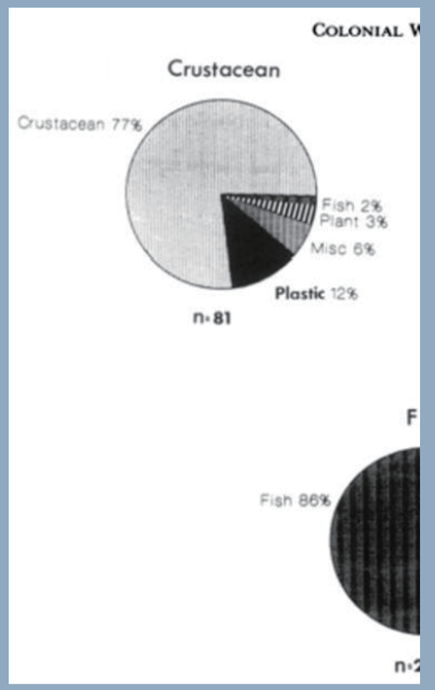
## 3.2 Petrel

Petrels are severely influenced by their diet and digestive structure. Petrels' food, such as squid and fish, has so many plastic particles that petrels have to eat plastic indirectly. Further, because of the unique structure of petrels' digestive organs, eating plastic can cause it to accumulate in the intestines and stomach without ending up digested in a short interval of time, which amplifies the harmful effects.

Petrels are highly susceptible to plastic particles' influences intake because their preys, including squid, fish, and crustaceans, contain many plastics. According to Bester et al.'s study, providence petrels' prominent preys are acephalobrachia squid and Myctophid fish; meanwhile, cook petrel and the Grey-faced petrel Galapagos petrel are also in favor of Myctophid fish. Moser et al. conclude that among these petrels' favorite foods, about 12% gizzard volume of plastic could be found in the crustacean, 13% gizzard volume of plastic could be found in squid, and 2% gizzard volume of plastic could be found in fish (Figure 3), making eating plastics easy.

Petrels' relatively distinct digestive organs enable the plastic particles to stay in their stomach for a long time, and plastic particles are harder to be digested compared to other forms of plastics. In some species of petrel, the contraction between the proto ventricles prolongs the retention of the plastic. Because of large cerebral ventricles length × average width relative to body size, they retain more plastic particles for a more extended time and are more easily exposed to the harmful effects of these ingested plastics (Petry&Benemann). Moreover, demonstrated by Petry and Benemann's experiments, the plastic particles may remain in a petrel digestive tract for at least a year before being completely corroded, which is longer than plastic fragments.

In some petrels with distinct digestive systems, the ingestion of plastic particles may cause blockage, which can impede the normal feeding function. Storm petrels have a distinctive stomach shape that preserves and grinds indigestible materials. Their upper digestive tract consists of two separate chambers with distinct features. The esophagus and stomach form a thin-walled and expandable chamber known simply as the anterior ventricle, followed by the thick-walled and muscular ventricles known simply as the gizzard.



Digestion begins in the ventricle, which reduces the intake of food to high-calorie gastric oil. The influx of hard matter such as plastic particles from the anterior ventricle passes into the much smaller gizzard, where it is further broken down and then into the intestine. (Youngren et al.) And because the passage that connects these two chambers, the isthmus, is so narrow, it's implausible that the material in the gizzard will return to the anterior compartment. Plastic particles would go into the small intestine are retained in the gizzard. When unusual hard parts are added to the gizzard, and before they are slowly digested into the bloodstream. As a result, they may block the passage of more material through the anterior ventricle, disrupting the regular feeding of petrels (Youngren et al.).

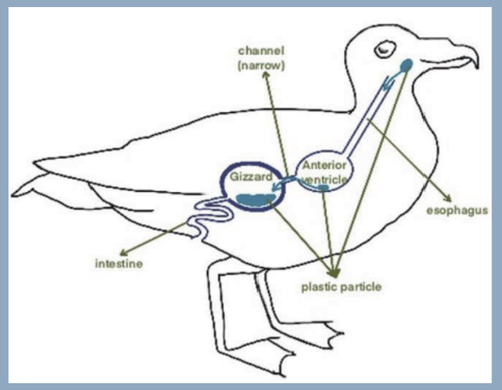



Fig. 4 The plastic pathway in the petrel's distinct digestive system

## 3.3 Shearwater

The population and body system of shearwater has been largely affected. 100% of shearwater boluses from 2002 to 2020 contained plastic (Alexander L. et al.). Three aspects of plastic particles' effects on shearwaters are discussed in this section.

Firstly, the shearwater has a high probability of consuming plastics because it likes to consume white plastics that are the most abundant in the sea. The Great Barrier Reef of Australia research concludes that shearwaters tend to ingest white (37.5%), consisting of 47% marine plastics (Verlis, K.M. et al.; Marti et al.). As the shearwater prefers to eat the most abundant plastics in the sea, they would be easily affected by subsequent damages caused by plastic particle ingestion.

Secondly, the ingestion of plastic particles influences shearwater's body conditions in terms of its mass and quality. The mass of plastic ingested was significantly negatively correlated with bird mass in samples of shearwaters (Puffinus Gravis) at Gough Island of South Atlantic Ocean. As table 2 shows, the mass of abdominal fat reserve was positively correlated with the bird mass (Table 1), and there is an observable correlation between fat storage mass and plastic mass (Table 1).

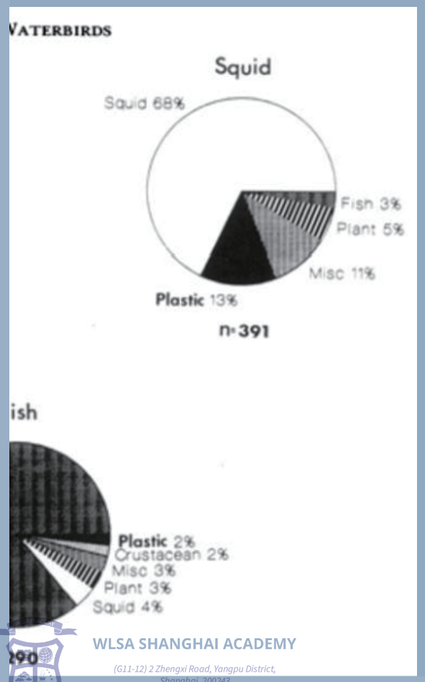



Fig. 3 Percent gizzard volume of items ingested by North Atlantic seabirds which prey primarily on crustaceans, squid or fish. Crustacean category includes insect. Miscellaneous items included unidentifiable material, sand, and feathers.
Source: Bester, A., et al. "Chick-Provisioning Behaviour of the Providence Petrel, Pterodroma Solandri." Emu - Austral Ornithology, vol. 102, no. 3, 2002, pp. 297–303., doi:10.1071/mu01021.

These data indicate that through decreasing shearwaters' abdominal fat mass, the plastic particles can, in effect, reduces the shearwater's body mass. Plastic load and body condition indexes, bird body mass, and fat index all showed significant changes in all data sets (Error! Reference source not found.) (Peter G. Ryan). This result shows that plastic particle consumption can affect not only shearwater's body mass but also its body strength.

Thirdly, similar to albatrosses, shearwater chicks are more susceptible to plastic particles' sublethal effects than adults due to their food resources and inability to regurgitate. Like albatross, the adult shearwater would feed their chicks by regurgitation that can excrete the plastic particles (Carey; Rodriguez et al.), through which chicks may eat plastic particles. Verlis, K.M. et al. reported that 21% of the chicks were fed plastic fragments by their parents, with an average intake of 3.2 plastic fragments, in the Great Barrier Reef of Australia. This finding is consistent with the fact that flesh-footed shearwaters chick, as naive consumers, consume more plastic fragments than adults (Carey; Rodriguez et al.). Moreover, Lavers & Bond showed that Flesh-footed Shearwater's chicks could not regurgitate pills until they have emerged.





Therefore, more accumulation of plastic particles in shearwaters' body may be further attributed to its inability to regurgitate. As a result, almost all of the young flesh-footed Shearwaters detected in the southern coast study area contained plastic fragments (Carey; Rodriguez et al.). Subsequently, shearwaters' chicks are likely to be exposed to sublethal amounts of plastic.

*Table 1 The Independent Parameters Influencing Bird Mass and the Mass of Abdominal Fat Reserves for the great shearwaters (Puffinus Gravis) Sampled, as Determined by Stepwise Multiple Correlation Analyses*

| *Dependent variable* | *Independent variable* | *Sign* | *Cumulative r²* |
|---|---|---|---|
| Great shearwater | Abdominal fat mass | + | 0.628 |
| Bird mass | Tarsus length | + | 0.698 |
| | Wing Length | + | 0.752 |
| Abdominal fat mass | Bird mass | + | 0.628 |
| | Culmen length | + | 0.716 |

Source: Peter G. Ryan. "The effects of ingested plastic on seabirds: Correlations between plastic load and body condition." Environmental Pollution (1987): 110-125. 10.1016/0269-7491(87)90197-7.

*Table 2 Ranges of the Principal Parameters for the Group of Shearwater Sampled*

| *Parameter* | *Great shearwater* |
|---|---|
| Birds mass (g) | 725-920 |
| Abdominal fat mass (g) | 1.0-9.5 |
| Number of parasites | 130-4016 |
| Plastic mass (mg) | 0.0-1441 |

Source: Peter G. Ryan. "The effects of ingested plastic on seabirds: Correlations between plastic load and body condition." Environmental Pollution (1987): 110-125. 10.1016/0269-7491(87)90197-7.

# 4. Governmental Intervention and Advice for Future Measures

In 1869, the first commercially used plastic was produced to provide a substitute for the exhausted ivory industry (Freinkel). Though at that time, producing plastics involved an extremely complicated synthesizing process, and it's merely for this single purpose, it had acted as a catalyst for later plastic inventions and changed people's view on the manufacturing goods. Since then, the plastic industry has flourished. Though consuming plastics was helping our human development to a great extent, plastics were currently considered a significant threat to the global environment because of the devastating downside effects. In the 1960s, the first sign of plastic debris was observed in the ocean. Soon after that, American Scientist Rachel Carson exposed that plastics could generate dangerous chemical pesticides in her book Silent Spring (Science History Institute). In the 1970s and 80s, the optimism towards plastics diminished even quicker (Science History Institute). The disposable wastes are not usually able to be degraded, which means they were theoretically capable of remaining in the environment forever. In the same period, the severity of the plastic pollution struck the globe once again with the Great Pacific Garbage Patch, which has often been described as "a swirl of plastic garbage the size of Texas floating in the Pacific Ocean" (Science History Institute). The intervention begins in the 1990s, and with the years followed, the range expanded. Countries across the globe each implemented strategies fitted to their political and economic situation (Science History Institute).

Seabirds' endangered situations can be significantly alleviated by the country's geographically specific plastic reduction policies, while themselves, each with a different susceptibleness towards plastics, should be treated with slightly varied emphasis. Though the ingestion of plastic is widespread across the oceans, plastic intake does not necessarily have an equal level of detrimental effects on every seabird. Being an extreme exception, the Northern Fulmer even increased its population and range in the North Atlantic Ocean, which should be put less rescuing emphasis on in the short term. However, in the long term, it still needs protection to prevent possible damages (Moser and Lee).

## 4.1 Current Relevant Governmental Interventions

Most governments are currently focusing on reducing plastic usage and promoting plastics' degradability to prevent marine plastic pollution from the upper stream, but few directly dispose of the plastics currently in the sea (Schnurr et al.; Schmaltz et al.; Schmaltz et al.; Linnebjerg et al.). In existing policies addressing the disposition of marine plastics, few of them employ nuanced methods according to differences among various seabirds. Among the European and North American countries, there are few long-term monitoring policies in relation to seabird protection coordinated by the government except for in Iceland and Norway (Linnebjerg et al.). This section will discuss current American and French policies in terms of reducing marine plastic pollution and elucidate the direction of future endeavors.

### 4.1.1 America

The American government enforces Microbead Free Waters Act as the only existing national-level ban on plastic pollution, by which the manufactures of microbeads (the solid plastic particles less than five millimeters intended to decorate the human body) through the incentive measure (United States Congress 2015). Reducing microbeads production can theoretically decrease the plastic particles in the ocean from the origin, considering microbeads are one of the primary sources of which: microbeads are conservatively estimated to contribute to 9.7 percent of plastic particles based on a survey conducted in Japan (Isobe). Besides this policy with national effectiveness, there are many regional policies because each state has the authority to employ its own intervention of waste disposal, which is granted by The U.S. Environmental Protection Agency (Linnebjerg et al.). At the regional level, the variety of laws is neither sufficient (Schnurr et al.). The only city in America near-Arctic region, Alaska for example, only has the legislation responding to plastic bag use. In terms of this sole facet, there are many nuanced laws in each city; some promote the low commercial usage of recyclable bags, and most others advocate the bans of plastic usage; however, the statewide law is still pending (Linnebjerg et al.; baglaws.com n.d.). Though insufficient, regional laws are nuanced based on circumstances and theoretically effective in reducing the plastic bags and, therefore, other plastic compositions dumping into the sea, but it remains a concern for the strength of local monitoring and clarification.

### 4.1.2 France

Just like the American Government, the French government passed the law "Loi n° 2020- 105 relative à la Lutte Contre le gaspillage et à l'économie circulaire" which translates to Law No. 2020-105 Regarding a Circular Economy and the Fight Against Waste (Boring). At the same time of boosting the economy, this law requires every household in France to use 100 percent recyclable plastics, which includes cutleries, plates, cups, and other plastic items containing microplastic particles (Boring, Independent). The French government would instead provide alternatives to replace those banned silverwares. (Boring, Independent) Another law passed by the French government is on global microbead intervention. According to the official journal of the French Republic, any "solid plastic particles in rinse-off exfoliants and cleaning cosmetics" will be banned by 2018, and by the start of January in 2020, plastic cotton buds will also be banned (Pompili). Though its policies are mostly national wide with no explicit policies for the local environment, France is still one of the pioneering countries in Europe to start a full range banning for plastic-related items and a completely recyclable plastic product system. As a result, it raises other countries' awareness and leads them to quickly develop an emulating plan that could practically alleviate partial pressure from France in solving this problem (Euronews). Since the banning of plastic in the above two acts started only in 2020, the acts cannot come to effect within only one year, so there are nearly no reports currently on the effectiveness of the policies. However, while plastic particle pollution is theoretically prevented, the plan to address the current pollution is urgent. A plan to reconstruct the habitats of those 1 million seabirds which died annually should be a major concern. (United Nations Educational, Scientific, and Cultural Organization).





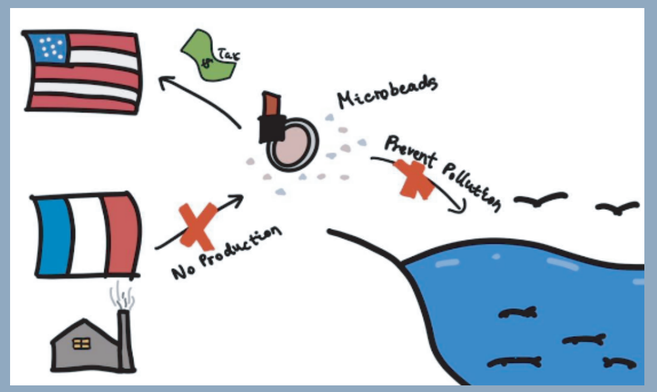



Fig. 6 American and French Nationwide laws as to reduce microbeads

## 4.2 The Advice For Future Intervention

The current policies and interventions taken by each entity ranging from government to local cities within the state have undeniable contributions to alleviate the marine plastic pollution from the upper stream. However, as mentioned, the governments take few actions to address the marine plastics in the lower stream corresponding to nuances of different kinds of birds. This con may be responsible for the ineffectiveness of birds' protections because, in many areas, the current severity of plastic pollution has been able to cause considerable negative impacts on local seabirds that are easily to be influenced. For example, in the northwestern Hawaii islands, the program Papahānaumokuākea Marine National Monument initiated by the American government in 2006 aims at protecting the ecosystem in northwestern Hawaii islands by forbidding abandoning gears that contain plastics into the ocean (Rand). The effect on local storm petrels within the protected area, however, is that during the year from 2006 to 2020, all of the storm petrels contain plastics in their stomach, according to the survey conducted by Sarah, Danial, and David. The failure of Papahānaumokuākea Marine National Monument to protect local seabirds demonstrates that emphasis on alleviation of plastic pollution from the upper stream cannot help protecting seabirds that are already endangered by the current severity of plastic pollution.

In response to the limitation of existing governmental interventions, we suggest future plastic pollution solutions from two perspectives. First, the government needs to increasingly emphasize solving the existing marine plastic pollution while keeping the current focus on preventing future plastic pollution. Second, the government should also focus on specific interventions targeted at certain varieties of seabirds' susceptibility to plastic pollution in the targeted areas while further developing national-wide interventions.

Also, in existing upstream preventions, there should be further development based on taxes and bans. Promoting plastic degradability and using bio-based raw materials are promising solutions because they enables plastics to be both quickly recycled and degraded instead of dumping them in to the sea(European Environment Agency). However, most plastics are still produced through fuels rather than bio-based materials and not designed to be biodegradable (European Bioplastics e.V). The governments should sacrifice the short-term loss of interests (not use fuels as raw materials) to protect the marine environment because the long-term opportunity cost (later redeeming the pollution) would be considerably higher.

# CONCLUSION

The plastic particle has detrimental effects on seabirds from three respects: behavioral, physical, and chemical, and there are individual differences as a result of different diet, foraging behaviors, and body's digestive structures, as three different kinds of seabirds—albatross, petrel, and shearwater demonstrate. Many governments have taken actions to address marine plastic pollution from the upper stream by emphasizing preventing future plastic pollution, which is generally effective.

However, there are two limitations: ineffective in solving existing problems and not corresponding to different susceptibilities of various kinds of birds. Therefore, we call for the governmental emphasis on existing marine plastic disposal and specific policies for birds. Also, we suggest plastics' promotion of degradability and modification of raw materials as future upstream preventions.



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# Journal





# 新媒体对广州市青年了解古画里古妆的影响

Myra Kacey Tina Beryl Una Caroline Sharon Sarah

随着新媒体的快速发展，有关中华传统文化的知识在被大众迅速了解。然而， 有关于古画（特指中国画里的人物肖像画）中的古代妆容的知识，因为传播方式 不够有效，仍是固定化的传统传播方式，没有有效的被群众了解。因此，本研究 将针对于“新媒体对广州市青年(15-34 岁)了解古画里古妆的影响“的主题做出“新 媒体对广州市青年了解古画里的古妆会产生积极影响“的假设，并根据研究和调 查来验证这一猜想，以此来帮助古画中古妆这一中华传统文化的传播。

本文运用了文献分析、问卷调查、线下访谈以及线上线下小实验的方法进行， 得出了以下关于广州市青年对古妆以及对新媒体看法的结论：

1. 青年对古妆的了解程度较低，参与度低，对古妆意义，传播等表示并未很 在意。

2. 在青年缺乏对历史知识了解的社会环境下，新媒体因具有互动性、数字化、 多样性、即时性等特点，对知识传播的程度相比起传统媒体来说更为丰富多样且 有效。

3. 青年对新媒体传播古妆的接受程度比传统媒体高。新媒体传播方式极大地 扩大了古画中古妆知识的传播范围。

为了更好地传播古画中古妆的文化，我们改进措施为：鉴于新媒体传播的种 种优势，我们应当运用新媒体技术对古妆文化进行传播。与此同时，传播时也需 要注意传播的内容，并结合实际社会问题和时代进行创新和调整宣传策略。

## 一.

在科技飞速发展的现代社会，先进的科技致使信息通道便捷有效，为人们提供了更快捷的了解信息的方法，同时也让世界各地文化交流互鉴。在越来越多的 信息，文化出现在人们视野的情况下，人们对本国传统知识的了解程度和对此的 兴趣都有所削弱。以古画中的古妆为例，因为是根据古时各个朝代的审美文化而 在当时盛行的妆容，被如今部分人认作为是夸张的与现代潮流相悖的。而古代化 妆品的材料提取工序复杂，古法材料多为对人体机能会产生负面影响的物质，因 此只有少数人愿意尝试了解。新媒体作为新兴的传播形式，也是受众广接受度高， 且有效率的传播信息方式则是合适的传播此类信息的渠道。目标受众，青年作为 承接上一代知识体系和教导影响下一代人思维方式的群体，在各个时代的思想精 神方面都占主导角色，

影响着社会潮流思想的走向。

在现存的研究和文献中可以了解到，有部分学者已注意到传统文化缺少被传 播的机会，并已经通过调研后得到的方法给文化的传播带来一定的影响。在大量 的研究和宣传下，传统文化也得到了一定的重视，并在与西方文化的结合下得到 一定程度的推广。例如故宫文创，在调查研究出咖啡是现代社会需求极高的商品 后，出品带有有代表性的中国传统包装的咖啡，使传统艺术得到了一定的宣传。 但多数学者的立场都是在于传播整个中国文化，或专注于文学类中国传统，但对 传统艺术的传播，例如古妆，相对较低。在此方面仅有极少数的图文视频资源可 供人们使用了解，并且多数资料是藏于古代文献中，因此多数人对此了解不深。

## 二.

在这样的社会背景下，我们希望通过研究新媒体对青年了解古画里的古妆有何影响并进行相关调查，实验及案例研究，探究新媒体的传播方式特性，及其受 众和对传播对象的影响。并研究出如何有效利用新媒体将信息的受众增至最大， 和最能令现代人接受及感兴趣的方式。以此找出最有效的传播方式和最能引起人 们兴趣激发人们对文化热情的传播渠道。并且在最后的实践中，用已得出的数据 做支撑，利用实验调查数据指出最有效率的传播形式将古画里的古妆让本就对古 妆感兴趣的人有更多的渠道接触古妆，让大众的能够在日常生活中欣赏到古妆且 对此产生兴趣，进行深入的了解。但目的不止于单一传播古妆妆面或类似知识。 古妆作为其中一种文化载体，承载了千百年的历史，而这其中的故事，文化的发 展进程都是我们希望通过古妆而能让大众更好的了解到的。

在考虑实验的可行性，地域的局限性以及题目的广度之后，研究主题定为“新 媒体对广州市青年对古画里的古妆的了解程度有何影响”， 新媒体在其中指代利 用数字技术，通过计算机网络、无线通信网、卫星等渠道，以及电脑、手机、数 字电视机等终端传播信息的形式。题目中青年的年龄将按中国国家统计局给出的 数据定义，为 15 岁到 34 岁。研究课题中的古妆则特指在中国传统艺术，人物画 作中出现过的各朝妆面样式形态。题中的了解程度将

会被分为广度和深度两方面 来测量。广度指横向的了解知识所覆盖的领域，将由发放关于古妆知识的问卷被 收集。深度指在同一领域下理解深浅，将通过案例研究得出数据资料。

基于小队对该题目的知识基础，我们的假设为：以广州市为例，新媒体对青 年了解古画里的古妆会产积极影响。新媒体将古妆可视化，日常化并增加了其受众和曝光度。在以上因素的影响下大众将会因为新媒体而拥有更便捷的文化了解 方式，从而提高大众对文化的了解程度。

## 三.

古画（指中国画里的人物肖像画）中的古代妆容属于中国传统文化的一部分，随着人们对于传统文化日益增加的关注，固定化的传播方式和单一的受众却无法真正推广古画中的古妆。而汪心馨在《新媒体时代下中华优秀传统文化传播的优化路径》 中明确提到：“新媒体包括数字化的传统媒体、网络媒体、移动端 媒体等所有媒体形式 (2019)”。虽然近期有许多关于新媒体宣传传统文化的研究，如 书法、戏曲等，但很少有研究者考虑到古画中的古妆这一类传统文化，笔者在调 查研究新媒体对于在广州市青年群体中传播古画中的古妆的影响，提出了假设 “新媒体对青年了解古画中的古妆会产生积极影响”。因此，笔者将通过搜查文献、问卷、访谈以及相关调查研究的方式对其假设进行研究。

古画中的古妆具有一定的研究意义。苗琳提到，女性形象的妆容在一定程度上是一个时代审美风尚的缩影，蕴含着社会文化内涵以及时代精神，随着朝代的更迭，女性形象的妆容也随着时代变迁而不断变化 (2020)。比如，因唐代较为开 放，妆容也多有变化，且融入了西域文化的特点；而宋代审美便清秀质朴，所以 妆容也更为素净典雅。因此，古画中的古妆有助于青年了解历史时代背景等知识。

但是，现代青年对以古妆为例的历史知识了解较为浅薄。胡蓉芳在《浅谈中 国电视古装历史剧应当承担的责任》中提到“关于中国历史的题目受访学生的平 均正确率不超过 30%”，并且将测试分数的及格线设于 60 分的情况下仅仅只有 15% 的受访者能够达到及格线 (2010)。根据此数据可以得出，在现代社会中只有 极少数的青年会对历史文化进行了解，而对古妆有兴趣甚至愿意去了解的人更是 少之又少。总体来说，在青年缺乏对历史知识了解的社会环境下，新媒体对知识 传播的程度相比起传统媒体来说有着较大的影响。

首先，新媒体的互动性、数字化、多样性、即时性等特点使得古画中的古妆的传播方式更为丰富多样且有效。孙义峰、荆伟婕和管青山指出：新媒体能够活 化非遗的展示形式，弥补了传统媒体较为单一的传播形式的劣势，并打破了时空 限制和局限性 (2020)。而汪心馨也提出新媒体迎合了现代社会的信息传播需求， 加之与传统纸媒、广播电视的相互融合，扩展了传统文化的受众覆盖面，并具有 更为针对的个性化特点，也注重了信息传播的便捷性和趣味性，从而为中华优秀 传统文化的传播提供全新的机遇 (2019)。田金良和杨季鑫也提到“进入数字时代以 后，借助网络媒体和移动媒体，信息交流的交互性增强，观者有了选择和表达的 自由”(2015) 与 “信息传播速度快、范围广，存储和传播非常容易” 的观点 (2016)。比如，知名美妆博主的古代改妆视频使更多青年更趣味和便捷的了解到古妆，而科普短视频也使他们不用翻书，就能随时随地了解、发表对于古妆的看法并转发 给他人。但是，传统媒体只能有限地传播给感兴趣的青年，又因为其时空限制无 法广为流传。因此，运用新媒体能够增加古画中的古妆的曝光度和多样性，并使 青年不受时空局限，从不同方面了解古妆。

其次，基于以上特点，新媒体的运用能够给古画中的古妆带来更多机遇。《新媒体时代非物质文化遗产的保护与传承》中提及，新媒体能扩大销售渠道，推动非遗融入现代生活。增加非遗作品的曝光度 (2019)。对于古妆来说亦使如此，新 媒体如微信，抖音，快手等软件，给商家提供了一个便捷的销售古妆的平台，商 家在网络上对自己的产品面向全国甚至全球进行宣传，最大程度的扩大了销售渠 道。如今很多商家古妆商业化，如化妆品联名，抓住了女性的消费取向，将古妆 与化妆品相结合，得到更广泛的传播。

但是，新媒体的运用也存在一定问题和需要解决挑战。荆伟婕还提出了关于非遗面临的挑战：现代文明冲击传统文明，新媒体革新非遗生产，世界各地文化 的交融与渗透，都使乡土非遗文化逐渐消失 (2019)。这与古妆所面临的挑战相 似——世界文化交融，各式各样的妆容涌入人们的视眼，古妆也不是日常妆容， 难以适应青年日益加快的生活节奏，尽管具有历史文化和美学价值但依旧面临被 淘汰的风险，需借助新媒体活化其形态进行保护和传承。新媒体的传播方式在利 于大众接受传统知识的同时也将传统文化所承载的精神和意义“浅表化”娱乐化” 和“庸俗化”。因此，新媒体足以让人们浅层的了解到以妆容的历史文化传统，但 不足以让受众者对相关知识有深入的了解。

因此，传播古妆方面也需要注意传播的内容。张弈博指出运用新媒体传承中华文化应坚守品质，重视传统文化的内容质量 (2020)。对于古妆方面亦是如此，不应该一味追求运用新媒体等创新和新颖的方式来吸引大众了解古妆，甚至扭曲 夸张其原本含义来，也应当注重传播的内容。而且，史珂提到目前传播深度内容 较少，因为人们现在生活节奏加快，缺乏时间去系统性地学习，而新媒体传播具 有时效性和记者缺乏专业性知识，导致报道大多只是说明实时，而非深入分析 (2018)。王翠指出，图文并茂的内容、年轻俏皮化的风格和相关知识的定期介

绍 能够拉近与消费者之间的距离，从而优化传播古画中的古妆的内容(2019)。因此 除了单纯运用新媒体推广古妆，也需要注意传播的内容，并结合实际社会问题和 时代进行创新和调整宣传策略。

古妆文化一直是被众人忽视的中华传统文化之一，虽有一定历史价值及意义，但目前还没有系统且有效的传播方式。相较于传统文化直白单一的输出，如果能运用多样性互动性的新媒体，以及有深度的内容，那古妆文化将会被更有效地传播给大众。

## 四.

研究结论 经过一系列对新媒体和古妆相关文献研究，以广州市青年(15-34 岁)为范围的问卷调查，案例研究和访谈后，我们进行了数据分析，研究结果显示新媒体 有接受度高，传播效率高，受众广及趣味性高等特质。在结合现代流行文化后，有潜力将古妆以大众更能接受的自媒体或是仿妆视频，美颜相机等方式有效传播古妆，为古妆的传播带来一系列积极影响。

此结论验证了先前的假设“以广州市为例，新媒体对青年了解古画里的古妆 会产积极影响”。具体积极影响如新媒体将古妆可视化，日常化并增加了其受众 和曝光度等。研究结论在新媒体增加古妆受众和曝光度的角度一致。同时自媒体，综艺纪录片等存在也证明新媒体能将以文字记录的内容可视化。但研究结果显示只有少数绘画或摄影职业者才会对古妆有了解，不足以证明新媒体将古妆日常化。同时结果给出新媒体可以使古妆的趣味性提高，使人们更愿意了解。

通过文献分析，可以得出新媒体对古画里的古妆的传播不止有积极影响，还有部分消极影响。主要表现为将信息娱乐低俗化及简单化。例如宋代的三白妆因 在额头鼻梁及下巴处会有跟现代高光形似的妆容，而被现代人戏称为高光打多了 的高光妆，而忽略了其存在的历史意义。总体来说，新媒体的传播给古画中的古 妆传播带来了积极和消极的影响。

在研究调查中，除主要研究内容及结论，还可得出以下观点，结论如下：1.当代广州青年对古妆的接受度高但是对此的兴趣一般，了解程度也偏低。仅 有绘画摄影这类会对此有所接触。且这一结果并不是由外来文化导致的。2. 相较于以图文为主的传统媒体，视频等新媒体的传播接受度更高且传播更有 效率。且在访谈和问卷结果中显示综艺纪录片，商业联名，仿妆视频，美颜软件 是广州青年更倾向于的了解古妆的方式。

在研究和控制变量后，实验仍存在一定问题。由于社会资源的缺乏，问卷和案例研究的样本数量偏小，并且性别占比相差较大，相对容易与事实产生偏差。在新冠疫情的影响下，接受访谈的对象极其有限，尽管是参与即有奖的活动仍然只有约百分之 30 的参与率。而参与线下研究的多为同校同学，在类似的教育环境和社交环境中产生的理解和思考较为相似，容易使成见影响实验结果

通过实验研究证明新媒体会对广州市青年对古画中的古妆了解造成积极和 消极影响。小队将利用新媒体的积极影响，通过被调查者选出的综艺纪录片，古 妆仿妆，美颜相机的形式让更多人看到古妆的可能性，以此吸引更多人了解古妆。也将通过此行为为现有的古妆爱好者提供深入了解古妆的渠道。并且我们会在融合现代文化和古妆方面着重考虑此行为是否有将古妆低俗化，在尽量减少消极影响的同时利用新媒体积极层面影响大众的了解广度及深度。


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# Campus Event

# Career Day

WLSA organizes Career Day every year for its students, inviting accomplished individuals from various fields to share their years of experience and provide students with knowledge and options for future career paths. On this year's Career Day on November 11, Baoshan campus, WLSA invited Mr. Liu Dele, President of Youku Tudou Group and Director of WLSA Shanghai School, Ms. Hu Qiao, Head of Wealth Management Business of Securities Company, Mr. Wang Yaohua, Editor and Reviewer of Shanghai People's Publishing House, and Mr. Taergai, Founder of Orange Dental. They shared their insights on entrepreneurship, financial markets, career choices, and humanitarian communication. Their unique experiences benefited all WLSA students and helped them have better visions in their future careers, set clear goals, step out of their comfort zone without forgetting the original intention, dare to try, make mistakes, and pick the fruits of victory in their minds at last.

WLSA 每年都会为校内学生举办 Career Day。通过邀请社会上的各行业内有所成就的人士来分享他们沉淀数十年的心得，来给校内的学生提供未来就职方向的一些知识和选择。而在 2021 年 11 月 11 日的这一场 Career Day 中，WLSA 邀请了优酷土豆集团总裁及 WLSA 上海学校董事刘德乐先生、证券公司财富管理业务负责人胡峤女士、上海人民出版社编审汪耀华先生，以及极橙齿科创始人塔尔盖先生来到宝山校区，分别分享了他们在企业家精神，金融市场，职业生涯的抉择，人文交流上的见解。他们的这些独特经验，让与会的 WLSA 学生受益匪浅，并且帮助他们在以后的职业生涯中不迷茫，树立明确的目标，在不忘初心的前提下一步步地迈出自己的舒适圈，敢于尝试，敢于犯错，摘取自己心目中胜利的果实。



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(G10 & A Level) 299 Tongji Road, Baoshan District, Shanghai, 200940

# Halloween Party

The post-midterm Halloween party is a great occasion for many students to adjust their pace and enjoy the campus life. Before the party, all G11 and G12 classes decorated their classroom with Halloween ornaments to set up a festive atmosphere.

On the day of the party, the Student Council offered different activities in each classroom, including Halloween movie showings, various games, candies and snacks, and most importantly, a school-wide costume party. Many students dressed up as their favorite characters or put on Halloween makeup, which added a joyful atmosphere to WLSA's Halloween party.

期中考试后的万圣节派对，是很多同学来适当调整自己的节奏，放慢自己的脚步，来享受校园生活的一个很好的场合。

在派对开始前，全校各班都通过各种万圣节特色的装饰来烘托节日的气氛。

在派对当天，学生会在各个教室提供了不同的活动，包括：万圣节电影的放映，举办各式各样的小游戏，糖果和零食的提供，以及最重要的全校范围的 costume party。

许多同学纷纷 cos 成平日里喜欢的角色，或化上万圣节特色的妆容，让为 WLSA 的万圣节派对更添了一份愉快的氛围。

# WLSA Tree Hole

疫情期间 + 申请季 + 网课… 我们的脑袋里总是充斥着各种焦虑和烦躁。但是不要让负面情绪占据我们的大脑。看看其他同学在想什么，看看他们的焦虑是不是和你一样，看看他们的烦躁是否被缓解。WLSA Tree Hole 挑选了大家可能都会有的问题，以匿名的形式展示，希望大家能在树洞里倾吐心事和烦恼，将负能量转化成正能量！

**Q1: 这一天隔离就像做梦一样，第一天来的真的非常不适应。哎，该怎么办啊…**

突然而来的消息，对于每个人来说都是一个应激，让大家有点手忙脚乱呢！相信树洞，你不是一个人在经历。隔离不知道要持续多久，但是想一想是不是很像我们的人生呢，永远不知道下一刻会发生什么，总有事情事与愿违。面对不确定性，我们能做些什么让自己可以在当下更加舒适呢，树洞的建议是

1. 解决问题，尽可能照顾好自己

太冷了，就申请加被子，空调不够热就坐在空调下面，实在不行洗个热水澡嘛，用热量传递的方式加温，或者运动起来，自己发热！

2. 用积极的方式思考当下的困境

例如，面对隔离这件事情，我们的想法可能是

啊，隔离好不自由啊，吃不好，又冷很难受

但是用资源取向的方式试试，看看我们已经拥有的

哇塞，第一时间，有关部分就采取了行动，一人一间房间，核酸检测，我们的安全是有保证的。一个人的时候，我可以做很多自己一直想做的事情呢，看书听音乐多棒呀。因为隔离，好几场考试取消了，我有更多的时间复习了，之后出国我可能都会一个人生活，这是一次很好的试炼。你看，这样想这件事情是不是没那么糟糕了。

**Q2: 自尊心过剩怎么办啊?**

自尊心过剩不是一件坏事啊，只要正确的引导和思考，它就会变成你的好帮手。过剩的自尊心会让你更加严格的要求自己，变成更优秀的你，但同时遇到挫折的时候也要学会接受与反思，不要被他们打到，坦然的面对，这会让你感受到加倍的轻松。

**Q3: 感觉跟周围人的世界观差距蛮大。这该怎么办?**

因为差异，我们才是与众不同的，世界才是千姿百态的呀。树洞觉得差距本身不是问题，不妨问问自己，差距太大对自己意味着什么？孤独，冲突，还是让自己没有归属感了？



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**Q4: 感觉现在的时间真的很少很少，每天都很累，该怎么平衡好学习和玩的时间啊?**

树洞君之前也有一样的问题呢，很少有人能百分百平衡好的，所以不要担心啦！建议把使用 4 象限法管理时间，把想做的，该做的事情按照紧急程度和重要性划分成 4 个象限，优先高效的去做紧急又重要的事～各个完成就好啦。

**Q5: 感觉一个人的独处回放大自己的负面情绪，特别是晚上。**

因为夜深人静就会感到格外孤独嘛
其实我也有一段这样的时间哦，离众人很遥远，半夜的时候一个人躲在被窝里偷偷哭，整个世界都是黑暗的，但是这时候就要敢于面对自己的负面情绪，可以找同学家长倾诉，或者也可以直接睡觉哦，可以做点喜欢的事情，来分散自己的注意力。

**Q6: 我有时候感觉自己什么也学不好，也很难集中精力学习。这该怎么办啊?**

什么都学不好？是不是太夸张了呀！树洞觉得每个人都有自己的长处的，只是可能没达到自己的目标，所以现在有点沮丧啦！

不想学的时候就好好玩呀，不过有时候还有作业需要完成，所以树洞后来想到了一个办法，激活不同脑区。比如说，可以语文数学换着做，物理历史轮着来，左右半脑轮流工作，性价比棒棒的！作业做完之后，成就感也让我心情很好啊。

**Q7: 真的好担心啊，不想在隔离的时候上网课，加上没有电脑，如果这种情况下上网课成绩绝对骤降。该怎么办啊…**

嗯嗯，树洞非常理解这种担心，但是同学要相信学校的老师们会考虑到这个情况的哟，耐心等等通知，一定会有解决的办法的。另外，电脑可能不是拉开差距的原因，如何使用电脑才是，手机也是同理，对吧。拿起手边的学习资料，或者做一些此刻能做的，让你觉得有意义的事情也是一个好的选择哦。

**Q8: 如何高效的复习？每次上课前复习的时候都在怀疑人生，感觉一直挣扎却找不到有效率的方法。不知道有什么可持续性的复习方法啊?**

一定要好好复习笔记，作业题，和老师给的资料，课后多多看经济新闻，对与错题和难点要重复总结归纳。这些老掉牙的复习方法一定要坚持才有用啊。

# 隔离期间那些事

疫情期间，为了加强防护，减少病毒传染的风险，隔离是必不可少的。在隔离期间，大家又会遇到很多问题，比如说网课的质量问题，设备的问题，心理上的问题。但是 WLSA 学子总是能在疫情面前保持良好的心态。

让我们来聊聊，疫情隔离那些事！

1. 上周四接到很突然的隔离通知，急匆匆地收拾了行李来酒店，一开始很焦虑，担心一个人住会无聊，担心影响校内的课业，也害怕无休无止戳鼻子怼喉咙的核酸检测。但是，通过跟医护人员的微信和电话交流，很快熟悉了隔离的相关事务，习惯了隔离的作息。到第三天就完全适应了，甚至还发觉了隔离的诸多好处：平常六点要起，但因为改线上上课的关系可以晚一个半小时起床，上课精神变好。省下的学校到宿舍的往返时间还可以做点运动。一个人居住也更能沉得下心，有更多自主安排的时间。总之，隔离教会了我随遇而安。

2. 对我来说隔离时光还是很快乐的！因为家离学校比较远又是走读，所以我每天上学放学路上都要一个小时，上网课就让我每天多出了两个小时的空余时间。而且又是高三申请季，时间本来就紧张，这多出来的两个小时其实给我一个喘息的时间。隔离在家任务少的时候会和爸妈在家里打麻将，每次都很快乐。我觉得这种快乐的家庭团聚时光对明年就要离开中国的我来说也是特别宝贵的！

3. 隔离生活已经过了一周，我也开始慢慢习惯隔几天一次的凌晨五点的核酸检测，习惯每天的盒饭，习惯一个人的“隔绝”生活。烦恼一定有：当课业和申请两座大山同时压上来的时候，我会因为找不到人及时倾诉而烦躁一个下午。看着窗外的蓝天白云，我也会怀念起之前可以自由地打羽毛球、排球的体育课。幸运的是，我还可以通过网络和爸妈、朋友沟通。省去了每天上下学的时间，我也有了更多空闲留给自己听歌，刷朋友圈，和静静地自我思考。的确，人生就是会经历种种意想不到的事件，这 14 天就当作是一次难得的生活体验了！



4. 我是一个很典型的群居动物。之前很多次都和我的朋友们说过，如果有一天，哪怕只有一天，我不能和任何人面对面说话，我一定会疯掉。因为我总觉得，我的能量来源需要来自于其他人。可现在，我面对的不仅是一天，而是十四天。

一开始，整个人真的很情绪化。第一天在吃晚饭时，因为拧不开一个玻璃瓶，我躺在床上崩溃大哭了半个小时；第二天，找不到快递，我狂砸桌子破口大骂整整一下午。在我的各种情绪，沮丧，气愤，焦躁，一直发泄直到疲倦时，我意识到我需要换一种生活方式：学会和自己心平气和、愉悦轻松地相处。

我开始给自己定好每天的计划，让自己的生活变得规律且充实，而不是在床上浑浑噩噩地度过一天。实在孤单，就跟家长约好时间视频聊天，或者和同学在群里激情吃瓜。我甚至发现，自己一个人，在酒店的这间小屋子里，有数不清的事情可以做：曾经嚷嚷着要做但总找不到时间做的，或者是被裹挟在人群中无法静心做的，比如运动，写随笔（其实就是有啥想法瞎写写），刷曾经一直想看的电影，静下心思考。

写下这篇感受时是我在酒店隔离的第五天半。依旧很期待隔离结束的那一天，可以重新见到两周没有见到的人，但在这段时间里我也可以做到平静自在地独处。平常的日子里，我总是不停探身向外，永远在和人交流。而现在，我开始学会向内，观察，了解，并且想办法丰盈自己。而我的能量来源，也不仅仅是依靠其他人，还可以来自自己。



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