

# Seekia



*A genetics aware mate discovery network.*

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## **Introduction**

The human species is a fascinating biological phenomenon with a complex and mysterious origin story. Geographically isolated groups of humans evolved separately over long periods of time, each genetically adapting to their unique social and physical environments. Many instances of interbreeding between members of different population groups occurred, infusing each group with new genetic variation.

What has resulted is a species which possesses astounding beauty and biodiversity.

## **Race**

We can classify humans into separate races. Races are defined by grouping humans by genetic attributes such as skin, eye and hair color; skin and hair texture; facial structure, and the alleles in their genomes which effect physical traits. If a human is sufficiently different from any other human, they are considered the only member of a unique race. Racial classifications are not fully discrete, because every human is genetically and physically unique.

We can also classify humans by their geographic ancestry by describing the locations where each person's ancestors lived at different times in history. Ancestry can be measured by analyzing genetic markers that a person shares with past human populations. Geographic distance was a significant impediment to gene flow between population groups for most of humanity's history. The humans within each isolated population group bred among themselves, resulting in the loss of genetic variation through the process of genetic drift. Consequently, members of these populations tend to be racially similar to each other.

## **Genetic Desirability**

Genetic desirability is defined as the degree to which humanity collectively desires particular genetic attributes. Desirable genetic attributes generally help humanity to flourish and be happy. Over time, humanity's desires should trend towards attributes which increase human happiness and wellbeing.

Genetic desirability is defined by four main attributes: beauty, health, intelligence, and personality. Healthy, beautiful, intelligent, happy, and virtuous people are collectively genetically more desirable than diseased, ugly, stupid, sad, and immoral people.

Certain humans are more genetically desirable than other humans, and certain races are collectively more genetically desirable than other races. There does not exist a singular person or race which is the most genetically desirable, but there are humans and races which possess greater and lesser degrees of genetic desirability. A gorgeous, intelligent, witty, dazzling, healthy, kind firefighter is much more desired and loved than an ugly, diseased, schizophrenic, disabled, deceptive, rude, thieving thug. Someone in our world may prefer the thug over the firefighter, but on average, humanity prefers the firefighter's genetic traits.

Genetic desirability varies between populations due to cultural and environmental differences. Each population will always have a measurable set of genetic attributes which are more desired than other attributes.

The world becomes a better place when it is populated with humans and races of a higher genetic desirability rather than those of a lower genetic desirability.

### **Beauty**

Human beauty is defined as the ability of a person's physical appearance to evoke feelings of sexual attraction, arousal, and pleasure in other humans. Beauty is subjective for each individual, but trends and patterns emerge when surveying large quantities of people. Human beauty ranking is calculated by comparing the sentiments expressed by large populations of humans. Some people are more beautiful than other people, and some races are collectively more beautiful than other races. Human beauty inequality is an inevitable consequence of human appearance diversity.

Beauty is more desirable than ugliness. It is easier to reduce and obscure a person's beauty if they have too much than to increase a person's beauty if they have too little.

## **Intelligence**

Intelligence is defined as the ability to understand information, recognize patterns, be creative, and solve problems. Intelligence is entirely derived from the brain and is thus a genetic trait, but can be influenced by a person's environment. Some humans are smarter than other humans, and some races are collectively smarter than other races. Cognitive inequality explains much of the outcome disparities between different humans and races that exist in our modern world.

Intelligence is more desirable than stupidity. Enough intelligence would allow a person to solve any problems that are caused by intelligence. It is also easier to reduce a person's intelligence if they have too much than it is to increase a person's intelligence if they have too little.

## **Health**

Health is defined as the proper functioning and well-being of the human body. Health is associated with a longer lifespan, increased mobility, and an absence of pain and illness. Some people are healthier than other people, and some races are collectively healthier than other races.

Health is more desirable than disease. Ability is more desirable than disability. Pain and suffering are inherently bad and unpleasant for humans to experience.

## **Personality**

Personality is defined as a person's thought patterns, behaviors, and methods for understanding, interacting with, and experiencing the world. Personality is largely genetic. Personality and intelligence are causally connected. Some people have more desirable personalities than other people, and some races collectively have more desirable personalities than other races. Some examples of desirable personality traits are happiness, virtue, hopefulness, empathy, calmness, compassion, sociability, generosity, cleanliness, honesty, perseverance, and kindness.

Happy and virtuous personalities are more desirable than sad and immoral personalities. It is impossible to have an excess of virtue. An excess of happiness could be undesirable if it decreases virtue by causing complacency, thus causing unhappiness for others. Happiness and virtue are causally linked for most people. Happiness is the ultimate goal of human life and is the only thing that humans desire for its own sake.

## Eugenics

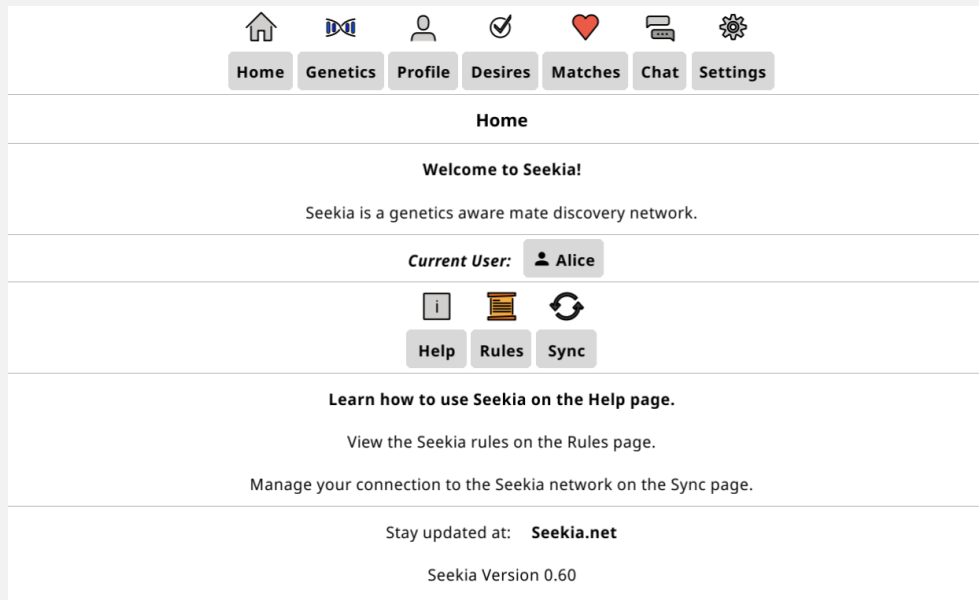
Eugenics is defined as any practice or process which improves humanity's genetic desirability.

Eugenics can be observed in many different processes. Diseases which disproportionately kill weak, disabled, and obese people can improve humanity's genetic desirability by reducing the prevalence of their undesirable genes. Long periods of poor farming weather can improve humanity's genetic desirability by causing unintelligent people who did not stockpile enough food to die.

The history of human evolution has been an overall eugenic process. Throughout human history, natural and human mate selection strategies have overall favored desirable genetic traits such as health, intelligence, beauty, and sociability. The breeding arena of the human species is a fierce Darwinian competition with large outcome disparities. The fittest humans with the most desirable genetics were able to live healthier and longer lives, attract the most desirable mates, and produce the greatest quantity of offspring. The processes of natural, artificial, and sexual selection caused the genetic desirability of our species to increase.

One limitation of historical human eugenic mating is that people have had to infer the genetic desirability of their potential mates from each person and their relatives' outwardly visible genetic traits. Sometimes, someone may possess more desirable genetic traits, but will produce less genetically desirable offspring due to unexpressed genetic mutations. There are also certain mate pairings which result in less genetically desirable offspring due to incompatibilities in each mate's genome. With modern technology, we are now capable of sequencing human genomes, helping us to understand who actually has the most desirable genetics, and how we can pair up humans in the optimal way to increase humanity's genetic desirability.

# Seekia



To help facilitate eugenic breeding and give people insight into the genetics of their potential mates, I present Seekia: a genetics aware mate discovery network.

Seekia is a mate discovery network where users can find a mate while having a deep awareness of each potential mate's genetics.

Users can share genetic information in their profiles such as monogenic disease probabilities, allele values, and ancestry.

Seekia enables users to browse and filter potential mates by their genetic attributes and the predicted genetic attributes of their offspring. Seekia allows for users to predict and control the genetic attributes of their offspring by selecting a mate who is the most likely to produce offspring with their desired attributes.

Users can view information about the health and physical traits of their prospective offspring with each potential mate. Users can choose their mate in such a way to reduce the probability of their offspring having genetic diseases and increase the probability of their offspring having certain traits.

Seekia aims to improve humanity's genetic desirability by helping to create mate pairings which are the most likely to produce healthy, beautiful, intelligent, virtuous, and happy offspring.

I will now describe an overview of the features and advantages of Seekia. The technicals of Seekia are described in greater detail in the Seekia documentation and code implementation.

## **Selective Breeding**

Seekia aims to increase humanity's genetic desirability by facilitating the eugenic technique of selective breeding. Selective breeding is the practice of breeding specific human pairs to produce humans of a higher genetic desirability. By encouraging breeding between certain people, it is possible to increase humanity's overall beauty, health, intelligence, virtue, and happiness. This technique is akin to combining the same set of foods together to create either 5 delicious meals or 5 revolting meals.

### **Beauty**

Seekia aims to beautify the human species by encouraging human mate pairings which will create the most beautiful offspring and increase the proportion of beautiful people and races on Earth. Seekia users will be able to choose their mate with a greater knowledge of what their offspring will look like, helping them to produce the most beautiful offspring belonging to the most beautiful races and possessing the most beautiful traits.

### **Health**

Seekia aims to make humanity more healthy by encouraging relationships between people whose offspring will have a lower likelihood of having genetic diseases. Users can sort their matches by their offspring's total monogenic disease probability and total polygenic disease risk score. Seekia measures a prospective offspring's disease risk by combining both user's genetic information to predict the offspring's genome alleles and disease risks.

### **Intelligence**

Seekia aims to make humanity more intelligent by encouraging breeding between specific human pairs who are more likely to produce intelligent offspring. Seekia users will be able to sort their potential mates by the average intelligence of their prospective offspring. Seekia users will choose mates with whom their offspring is likely to have a higher intelligence. This process will cause humanity's intelligence to increase because humans who possess a more compatible set of genes for intelligence will be more likely to breed with each other. Seekia aims to produce an average offspring intelligence prediction for each potential mate pairing by combining both user's genome alleles to create many potential offspring genomes and measuring each offspring's predicted intelligence.

## **Personality**

Seekia aims to increase the desirability of the personalities of the human species by encouraging breeding between specific human pairs who are more likely to produce offspring who are virtuous and happy. Seekia aims to implement a prediction system that can predict how happy and virtuous someone is from their genome and use that system to measure the virtue and happiness of many prospective offspring genomes for each potential couple. Users will be able to sort their matches by how desirable their offspring's personality is likely to be. The creation of the prediction system should utilize training data which contains many people's genomes and information about their personalities.

## **Open Source**

The genetic future of the human species should be steered by open source technologies. Freely available source code will help genetics aware mate discovery technologies to be impartial, auditable, decentralized, and rapidly improvable.

The Seekia application is open source software. It is released into the public domain under the Unlicense. It is written in Golang, an open source programming language.

I encourage others to replicate and improve upon Seekia's technology. I want alternative mate discovery services to incorporate genetics aware features, even if they are closed-source and for-profit. No attribution is necessary.

Seekia is not reliant on proprietary mobile app stores. The Seekia application can be compiled for use on mobile platforms, but users are recommended to use the desktop app on an open source operating system.

## **Decentralization**

The genetic destiny of the human species should not be controlled by a small number of entities. Centralized mate discovery services can attempt to encourage certain kinds of relationships to form. For example, a nefarious mate discovery service could try to increase the prevalence of genetic disorders by encouraging relationships between people who have a higher probability of producing diseased offspring.

The Seekia network strives to be open and decentralized. The Seekia network aims to be resilient in the event that any host suddenly stops participating or is compromised by bad actors.

Anyone can participate as a network host, which involves serving profiles and messages to other network peers. It is impossible for a single host to prevent specific profiles and messages from reaching the rest of the network. Users broadcast and download content to and from multiple network hosts.

The decentralized architecture of Seekia helps to sustain network reliability. User data exists on many computers around the world, so events such as solar flares and hosting provider bans are less likely to result in a loss of user data or network downtime. Each user's application periodically rebroadcasts content to help prevent user data from disappearing from the network.

## **Dark Web**

Seekia plans to utilize the Tor mixnet anonymity network to provide users with privacy.

User requests are sent through the Tor network to prevent sensitive data such as user mate desires and conversation partners from being linked to a user's identity. Hosts can choose to host over the Tor network to shield their IP address and protect themselves against potential risks. Hosts and moderators can choose to host or moderate over clearnet to increase their internet speed.

## **Cryptographic Identity**

Each user has an Identity Key, which is a cryptographic signing key. A hash of this key is called a user's Identity Hash, which is their unique identifier on the Seekia network. User profiles and messages are digitally signed with the author's identity key.

Centralized mate discovery services can sabotage their user's mating efforts by editing profiles and messages. Content on the Seekia network is cryptographically signed, making it impossible to impersonate users without their private keys.

A user's identity key is derived from a 15 word mnemonic seed phrase. A seed phrase can be used to recover a user's identity on any device.

There are three identity types: Mate, Host, and Moderator.



## Profiles

Each Seekia user has a profile. Users must broadcast a profile to be able to chat with other users. Profiles which are broadcasted to the network are viewable by anyone. Users should only share information in their profiles which they are comfortable being fully public and searchable.

User profiles can contain information about a variety of topics such as age, location, biological sex, gender identity, sexuality, genetics, race, height, body type, language, fame, wealth, infectious diseases, drug use, hobbies, job, beliefs, diet, and pets.

Users can browse the network and find matches for free without creating an identity or broadcasting a profile. This freedom allows many more people to search for matches, which should significantly increase the quantity of users who eventually broadcast a profile. A web explorer should be built that allows anyone to view user profiles without having to download the Seekia app.

## Questionnaires

A questionnaire is a set of questions that users can create and share on their profile. There are 2 kinds of questions: Choice and Entry. Choice questions offer a selection of predefined options. Entry questions allow users to respond with any text, and can also be constrained to only allow numerical responses.

Users can create questionnaire responses and send them to other users in encrypted messages. Users can filter and sort their matches and conversators by the responses that they provided to their questionnaire. For example, a user could create a numeric Entry question asking how many countries other users have visited. The user could then sort their matches by their responses to this question.

## Desires

Desires represent a user's mate preferences, and are used to generate a user's matches. Users can choose their desires within the Seekia app. Seekia aims to give users total control of the algorithmic curation of their matches.

## Match Scores

Each desire has an Importance, which is a number the user can adjust. Each desire's Importance is added to a user's Match Score if the user fulfills the desire. Users can sort their matches by their Match Score.

## **Desire Options**

Each desire has 1 or 2 options: Filter All and Require Response.

Filter All, when enabled, will filter all users who do not fulfill the desire. Without this enabled, a desire only represents a preference rather than a requirement. The desire will still influence user match scores.

Require Response, when enabled, requires users to have provided a response to the attribute. For example, if a user enables Require Response for Age, then only users who have provided their Age will qualify as a match.

A user's desires are stored locally on their machine. A user's desires do not need to be uploaded anywhere or shared to the network.

## **Download Desires**

Users can choose their Download Desires, which are the desires that users are comfortable sharing with hosts. The more desires they share, the fewer profiles they will need to download. Most users should share desires such as Age and Distance, because these are usually not too private or embarrassing to risk being publicly revealed. If a user does not select any download desires, the Seekia app will download all of the newest mate profiles on the network, allowing the user to privately generate their matches without having to share any of their desires to hosts.

## **Greet, Reject, Like, and Ignore**

Users can send Greet and Reject messages to other users. Greet messages signal interest, and Reject messages signal disinterest. Users can filter their matches and conversations to only show users who have greeted them, and to hide users who have rejected them.

Users can also designate other users as being Liked or Ignored. A user's Liked and Ignored users are stored on their machine and are never shared or uploaded anywhere. Users can filter their matches and conversations to only show users who they have liked, and hide users who they have ignored.

Allowing users to browse mates without being immediately forced to swipe left or right on them allows Seekia users to better understand the population of potential mates before deciding on who they want to pursue.

## Genetics

Users can browse potential mates while having a deep awareness of each user's genetics and the predicted genetics of their offspring. Seekia gives users the ability to choose their mate in a way that maximizes the health of their offspring and increases the probability of their offspring possessing their desired traits.

The Seekia application is capable of producing genetic analyses on raw genome files. Users and couples can perform offline analyses of their genomes within the app. Genetic analyses are computed privately on user machines without uploading any data anywhere.

There are two analysis types: Person and Couple. A person analysis contains a person's monogenic disease probabilities, polygenic disease risk scores, and predicted trait outcomes. A Couple analysis is performed for two people, and contains the monogenic disease probabilities, polygenic disease risk scores, and trait probabilities for offspring produced from both people.

Seekia plans to add more genetic attribute analyses and genetic compatibility testing features. Kinship analysis technology should be built into Seekia to help users avoid accidental inbreeding.

Providing genetic analysis tools in a free, easy to use, open source piece of software will help humanity in various ways. Seekia's analysis technology will help to avoid bias in analysis results from closed-source providers. Seekia is free and easy to use, which will help to prevent companies from charging money for providing the service of analyzing people's genomes. Seekia also aims to give all embryo selection providers around the world access to the same analysis technology.

### Raw Genome Files

Users must first import their raw genome file(s) from sequencing companies. The sequences obtained from these companies usually contain some inaccurate reported gene values. To remedy these errors, users can import as many raw genome files as they desire to find and root out conflicts. Seekia will combine any number of raw genomes into two genomes to be analyzed: Only Include Shared and Only Exclude Conflicts.

The Only Include Shared genome is the most accurate, and will only include genome locations where at least 2 files have agreed on the locus value. If conflicts are found, then the most attested value is chosen. If a tie exists between all files, then the location is not included.

The Only Exclude Conflicts genome is less accurate, but includes more data. It is created identically to Only Include Shared, except it will include locations which only 1 genome file has recorded.

Each analysis reports the results from each of the component genomes and the combined genomes, so users can see where conflicts exist and how those conflicts effect the analysis results.

## **Monogenic Diseases**

Genetic disorders are a significant issue for humanity, causing severe suffering for millions of people. The prevalence of genetic disorders among humans is increasing due to the weakening of the natural selection pressures for health. As a result of lifesaving medical technologies, people with genetic disorders are living longer and healthier lives, and are more likely to produce diseased offspring who possess their defective genes.

Seekia aims to drastically reduce the prevalence of recessive monogenic diseases within the human species. There are thousands of genes which, if defective, cause recessive monogenic disease in humans. All humans have 2 copies of these genes. A recessive monogenic disease is a disease which only causes symptoms if both copies of a person's gene are defective. Most people are carriers for many recessive monogenic diseases. A carrier has 1 defective and 1 healthy copy of the disease causing gene. Few people have defects in both copies of the same gene, which is required to cause disease symptoms.

If two people who have the same recessive monogenic disease breed, their offspring has a ~100% probability of having the disease. If someone with a recessive monogenic disease breeds with a carrier, their offspring has a ~50% probability of having the disease. If two carriers of a recessive monogenic disease breed, their offspring has a ~25% probability of having the disease. If neither people are carriers, or only one person is a carrier and the other is not, or only one person has the disease and the other is not a carrier, their offspring has a ~0% probability of having the disease.

In order to prevent people with recessive monogenic diseases from being conceived, we must prevent people who have any defects in genes for the same diseases from breeding with each other. This practice only requires reducing each person's pool of potential mates by a small amount (~5% in 2024), but will result in a drastic reduction in the prevalence of recessive monogenic disorders within the human species.

A Person analysis describes if a person has each monogenic disease and their probability of passing a disease variant for each disease. A Couple analysis will report on the offspring's probability of having each monogenic disease. Users can share their monogenic disease probabilities on their profiles. Users can filter other users by which monogenic diseases they have. Users can filter and sort users by their offspring's probability of having a monogenic disease.

Users have 2 options for filtering their offspring's monogenic disease probability: 0% and <100%.

Selecting 0% will only show the user potential mates with whom the user's offspring has a 0% probability of having any monogenic diseases. This option will filter all potential mates who have defects in the same recessive monogenic disease-causing genes as the user. The 0% option will also filter all users with dominant monogenic diseases, because those users always have a ~50% or greater probability of passing their dominant monogenic disease to their offspring. The 0% option should be selected by users who do not want to use embryo screening for reproduction.

Selecting <100% will only show the user potential mates with whom the user's offspring has a <100% probability of having any monogenic diseases. This option will filter potential mates who have the same recessive monogenic diseases as the user. This option will also filter any users who have a double dominant monogenic disease, because all offspring produced by these individuals have a ~100% probability of being diseased. The <100% filter is useful for users who plan to use embryo screening, and only need to have the capability of producing disease-free offspring with their mate. It is still better to avoid these kinds of relationships, because both people could accidentally conceive diseased offspring without using embryo screening.

## **Polygenic Diseases**

Polygenic diseases are diseases whose risk is influenced by many genes.

A Person analysis describes a person's risk score for each polygenic disease. A Couple analysis describes a prospective offspring's average risk score for each polygenic disease. Users can share their alleles for genes which influence each disease's risk on their profiles. The Seekia app is able to calculate the polygenic disease risk scores for prospective offspring between each pair of users. Users can sort potential mates by their offspring's polygenic disease risk scores. Seekia enables users to mate with other users with whom their offspring has a lower probability of having polygenic diseases.

Seekia allows for a user's polygenic disease risk to influence their sexual market value. For users who share their polygenic disease alleles, their disease risk is calculable from

their profile. Users can sort their matches by each match's total polygenic disease risk score. Users who are more likely to be healthy will be more sought after. Users with a higher risk of dying from various diseases may choose to mate with each other. Users with a higher risk of cognitive decline in their old age may choose to mate with users who do not have an elevated risk, increasing the probability that the user's mate will be able to care for them in their old age.

## **Traits**

A Person analysis contains a person's predicted trait outcomes, and a Couple analysis contains the couple's offspring trait outcome probabilities. Users can share the alleles in their genome which influence each trait in their profiles. The Seekia app can calculate the offspring outcome probabilities for pairs of users. Seekia allows users to filter and sort potential mates by their offspring's trait outcome probabilities.

A user could sort users by the probability of their offspring being able to tolerate lactose. A user who enjoys cooking lactose-based meals could use this technology to maximize the probability that their offspring will be able to tolerate those foods in adulthood. Users can also try to maximize the probability of their offspring having a certain hair texture or eye color.

In summary, the genetic matchmaking technology within Seekia is a major improvement to the human mating experience. These features can be used in conjunction with the genetic screening of embryos to maximize each user's ability to increase the health of their offspring and to choose the traits of their offspring which they desire.

## **Ancestry**

Seekia is an ancestry aware mate discovery network. Users can share the ancestral populations they are descended from and the haplogroups they belong to. Users can filter other users by their ancestry, and can view the calculated ancestry of their prospective offspring with each user.

Genetic ancestry is a source of identity, pride, and meaning for many people. Seekia gives users the ability to obtain a mate and produce offspring who are descended from their desired ancestral populations. Filtering and sorting by ancestry will also help users to find mates who belong to their desired race(s), because ancestry is correlated to race.

User profiles can include ancestral analyses from multiple providers and computational methods. The Seekia app is also planned to provide the ability to perform ancestral analyses from raw genome data files.

## **Race**

Users can browse potential mates while having a deep awareness of each user's race and the predicted race of their offspring. Users can share detailed information about their race such as their skin, eye and hair color; hair texture; and the alleles in their genome which effect physical traits.

Seekia enables users to browse and filter potential mates by their racial attributes. Seekia can also calculate the racial characteristics for prospective offspring between users. Seekia allows for users to predict and choose the race of their offspring by selecting a mate who is the most capable and likely to produce offspring of their desired race.

## **Racial Similarity**

For a person to have offspring who look as similar as possible to them, they should breed with someone who is the most racially similar to them, without being so similar that the negative effects of inbreeding occur. Users are able to sort other users by their Racial Similarity, a calculation which measures trait similarity, trait gene similarity, ancestral similarity, and haplogroup similarity. This tool can help to cure racial loneliness, the condition of being unable to find members of one's own race to mate with and befriend.

Trait similarity compares user traits such as eye color, skin color, hair color, and hair texture. Trait gene similarity compares the alleles responsible for physical traits from each user's genome. Ancestral similarity compares the geographic distance between each user's ancestry composition locations.

Facial similarity detection technology is another planned feature for Seekia. The Seekia app could compare user profile photos to help users to find potential mates whom have similar facial structures. Users could also import photos of people they are strongly attracted to for the purpose of finding a mate who looks similar to them.

## **Non-Profit**

A common criticism of for-profit mate discovery services is that they have a perverse incentive to extract money from their users. Critics claim that a profit incentive may motivate these services to keep users as customers by preventing them from finding a long term mate and instead encouraging users to go on many fruitless dates with incompatible people.

No entities profit directly from Seekia users. The only reason why participating in the Seekia network costs money is to prevent spam and bad behavior. All spent cryptocurrency funds are destroyed. Requiring spent funds to be burned discourages bad actors from attacking the network, because it is impossible for them to recover any funds used in their attacks. Destroying funds also reduces any incentive to keep costs high because there are no direct financial beneficiaries.

Hosts and moderators are not financially rewarded by the network protocol. Most hosts will hopefully be volunteers and non-profit institutions who are altruistically motivated. Moderators could be funded by donations, companies, non-profit institutions, or decentralized autonomous organizations.

## **Spam Prevention**

Without any form of spam prevention, a single malicious actor could spam the Seekia network with billions of fake profiles and messages, rendering the network useless.

Seekia requires users to fund their identities before broadcasting content to the network. Users must also fund each message, report, and mate profile.

Users destroy cryptocurrency to fund each identity and piece of content. A simple way to accomplish this is to derive cryptocurrency addresses from identity and content hashes, and to send funds to these address to destroy coins. This strategy would require at least one cryptocurrency transaction to fund each identity and piece of content, which would limit the activity on the Seekia network to the scaling capabilities of the utilized cryptocurrencies.

## **Payment Proofs**

Payment proofs are used to enable the funding of many different identities and pieces of content in a single blockchain transaction.

A payment proof is a merkle tree path. A payment proof merkle tree is a bundle of cryptographic hashes. Each leaf node in the tree is a hash of an identity hash or a content hash. The on-chain address for each payment proof is derived from the merkle tree's root. The value of the cryptocurrency sent to each merkle tree's blockchain address is distributed among the tree's leaf nodes.

The majority of payment proofs will be created and funded by Payment Proof Providers. These providers bundle payments from users into merkle trees. Users can purchase virtual custodied cryptocurrency from each payment proof provider using cryptocurrency or other payment methods. Users use these funds to purchase payment



proofs, which are broadcast to the Seekia network. Users can also create and fund payment proofs independently without interacting with payment proof providers.

If any payment proof providers are suddenly shut down, the payment proofs they created will still be valid. The users who purchased funds from them will lose any funds they had not already spent. User clients will be able to switch to a new provider, and user balances will reset to 0.

Payment proofs also provide a privacy advantage. Blockchain transactions can often be traced. Without payment proofs, the addresses where funds originate for each transaction could be traceable, allowing observers to trivially identify which messages were sent by the same identity. Payment proof providers are able to break the link between the purchasing of account funds and the purchasing of payment proofs for their users.

Payment proof providers are trusted to not log user behavior. If a snapshot of a non-logging payment proof provider's database were ever leaked, sensitive information such as the senders of messages would not be revealed.

Payment proofs also function as timestamps. A payment proof proves that the funded identity or content existed at the time of the payment.

## **Messaging**

Seekia provides a messaging system for users to communicate privately.

Each message must be funded. The cost of funding a message is determined by its size and desired duration.

Users can filter and sort the users who they are communicating with. For example, a user can filter their conversations to only show conversators who fulfill their desires, and sort their conversations by the distance of the conversator.

## **Message Inboxes**

Every Seekia message contains a publicly viewable 10 byte value called an Inbox. All other sensitive elements of each message such as the sender, recipient, and communication are encrypted.

There are two types of message inboxes: Public and Secret.

A user's public inbox is created by hashing their identity hash. Everyone can see the quantity and size of messages in each user's public inbox. Public inboxes sacrifice privacy but increase sync speed. A more private method would require users to download information about messages which were not sent to them, increasing bandwidth and message latency. A way to mitigate the public inbox privacy flaw is to create services which send fake messages to users in an attempt to equalize the quantity of messages in each user's public inbox.

If Seekia only used public inboxes, it would be possible to determine which users were chatting with each other by analyzing message sent times and metadata about users. For example, if two users who live near each other are both receiving messages around the same time, it is possible to guess that they are communicating.

Secret Inboxes are used to resist this kind of analysis. Each message contains 2 secret inboxes which belong to the sender: Current and Next. The recipient sends future messages to the sender's secret inboxes rather than their public inbox. Each secret inbox corresponds to a secret inbox epoch. Users send each message to the secret inbox which corresponds to the epoch of the message's sent time. Identical epoch start and end times are used by all message senders. Even if an attacker were able to correlate pairs of communicating secret inboxes, all active secret inboxes change at the same time, facilitating a mixing effect for all secret inbox pairs.

## Encryption

All chat messages and network communications are encrypted with Nacl and Kyber. Kyber is a quantum-resistant encryption method. Seekia plans to utilize more encryption methods in the future. Using many encryption methods protects against future data decryption in the event that utilized cryptography is broken. If all encryption methods used to seal messages were broken, previously broadcasted messages would be decryptable. Expired messages may be stored by malicious entities who are preparing for this possibility.

Seekia users share their chat encryption keys on their profiles. A user's chat keys are generated locally on their machine, and are periodically replaced with new keys. Old keys are automatically deleted, and users can choose to delete old messages. After deleting a broadcasted message's private chat keys and unencrypted contents, the message cannot be decrypted if the sender or recipient's machines or seed phrases are compromised.

## Statistics

Seekia provides users with the ability to view their Desire Statistics. Desire statistics describe the quantity and percentage of users who are being filtered by a user's desires. For example, if a user's total match percentage is 5%, it means that 5% of a random selection of Mate user profiles they have downloaded pass all of their desires.

Desire statistics also describe each desire's filtration statistics. For each desire, the user can see how many users the desire is filtering, what percentage of users pass the desire, the quantity of matches a user would have if they disabled the desire, and what percentage of users would be a match if they disabled the desire.

Seekia provides graphing functionality which gives everyone the ability to view statistics about users. For example, the app can display a chart plotting Age on the X-axis and Average Wealth on the Y-axis. User statistics graphing enables anyone to learn more about the demographics of Seekia users, and can inform users about how they should alter their desires to increase their match percentage.

The Seekia network can act as a public census resource. User profiles will be available to all researchers around the world, enabling interesting and valuable new insights about humanity to be discovered. Harvesting and analyzing user data is not the primary purpose of Seekia. People are more likely to lie on a mating profile than a research survey. Researchers should conduct their own studies to collect higher quality data.

## Moderation

Seekia has a transparent and decentralized moderation system.

Fair moderation systems are vital to ensure that mate discovery technologies are genetically impartial. Biased mate discovery services can ban their ideological enemies to harm their happiness and reproductive capability.

Anyone can participate as a moderator. Moderators create reviews of identities, profiles, and messages.

Each identity, profile, and message has a consensus verdict. Profiles and messages can be Approved, Banned, or Undecided. Identities can be Banned or Not Banned. Identities cannot be approved, because their behavior can always become unruly.

The moderators who have approved or banned each identity, profile, and message are publicly viewable, along with their reasons for doing so.

## **Identity Scores**

Each moderator has an identity score which determines their power. An identity score is the sum of all cryptocurrency sent to a moderator's identity score cryptocurrency addresses, valued in gold at time sent. Each address is derived from the moderator's identity hash and thus has no known private key. Funds sent to these addresses are destroyed forever. Anyone can destroy cryptocurrency to increase the identity score of moderators who they trust.

A moderator's rank is calculated by sorting all moderators in the order of their identity scores. Moderators can ban moderators who are below them in rank. The verdict of a piece of content is calculated by summing and comparing the identity scores of the content's approve and ban advocates.

Identity scores provide many advantages. All moderators must spend funds to participate, increasing the barrier to entry for malicious moderators. Moderators are less able to increase their power by creating many moderator identities. Malicious moderators will suffer financially because they must fund new identities after being banned.

Relying on identity scores to settle disputes encourages cooperation between moderators. When moderators disagree, rather than leapfrogging each other by funding their own identity scores and banning each other, they are incentivized to resolve their differences or to recruit other higher ranked moderators to ban their opponents.

## **Supermoderators**

Supermoderators are a set of moderators chosen by the network admins. Supermoderators have the absolute authority to ban non-supermoderators. Supermoderators are ranked and possess the ability to ban supermoderators below them in rank.

Supermoderators are a safeguard against attacks on the moderation system by malicious moderators. In the scenario where a moderator funded their identity enough to become the top ranked moderator and banned all other moderators, another moderator would have to fund their identity enough to gain the ability to ban this malicious moderator. Supermoderators are able to ban these malicious moderators without spending any funds.

## **Sticky Viewable Statuses**

Each identity, profile, and message consensus verdict is always able to change. A verdict may be unjust for a period of time. For example, a malicious moderator could fund their identity to a high rank, ban all moderators below them, and ban all content on the network. This moderator could cause ruleful content on the network to have a Banned verdict. To undo the damage, a higher-ranked moderator or supermoderator must ban this malicious moderator to restore sanity to the network. This could take a while, depending on how highly ranked the malicious moderator is.

Sticky viewable statuses are used to solve the problem of verdict variability. Each identity, profile, and message has a sticky viewable status which is determined by the percentage of its viewable verdicts for a defined time period. A viewable verdict is a verdict which an identity or piece of content must possess to be visible to regular users. To be considered viewable, Mate profiles must be Approved, whereas Host and Moderator profiles can be Undecided or Approved.

Sticky viewable statuses become stuck and impervious to temporary changes to real-time verdicts. Sticky statuses allow content to remain viewable and served to users during attacks on the network by malicious moderators.

## **Attribute Reviews**

When reviewing profiles, moderators can submit Profile reviews or Attribute reviews. An attribute review is a review of a specific attribute within a profile.

Attribute reviews provide several advantages. Moderators can specify the attribute which motivated them to ban a profile. Moderators do not have to approve all attributes of a profile again if the user resubmits their profile with 1 attribute changed. Moderators would only have to approve the single changed attribute if they had already approved all of the profile's other attributes.

Moderators have the flexibility to choose which attributes they want to review. A moderator can choose to only review images and still contribute to the network. Within the Seekia app, moderators choose the attribute they want to review and cycle through the attribute value for each user profile. This functionality reduces the cognitive load of context switching and increases moderator efficiency.

## Reporting Content

Users can report identities, profiles, and messages. Reports are created anonymously and have no public author. Each report must be funded to prevent spam.

To report a message, a user includes the decryption key for the message in the report. Moderators use this key to decrypt and view the message. The decryption key is included in each message review, which functions as a proof that the reviewer has seen the contents of the message.

## Conclusion

The goal of Seekia is to accelerate humanity's adoption of genetics aware mate discovery technology.

Informing human mating choices with genetic information will have a major positive impact on the human species. Seekia aims to usher in a new era of human breeding strategies. Seekia aims to bring genetic order to humanity's breeding patterns.

Seekia aims to beautify the human species; reduce the prevalence of genetic diseases; increase humanity's intelligence, happiness, and virtue; and boost global fertility rates.

Seekia has the potential to create families; facilitate the conception of beautiful, healthy, intelligent, virtuous, and happy offspring; and increase the amount of love in the world.

Join me in my effort to change the world and build a better future for all.

The genetic future of our species is at stake.

## Learn More

Access Seekia's websites from these domains: **Seekia.eth** or **Seekia.net**

Access Simon Sarasova's website: **SimonSarasova.eth**

Research online for instructions on how to access .eth IPFS websites.

These domains may have been seized or lost by the time you are reading this. You can only trust that content is authored by me if it contains my digital signature. You can verify that Seekia memos are signed with my identity hash by using the Seekia application.

Simon's Sarasova's identity hash is: *simonx5yudleks5jhwhnck5s28m*