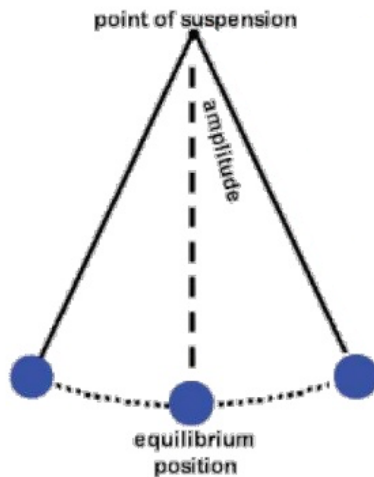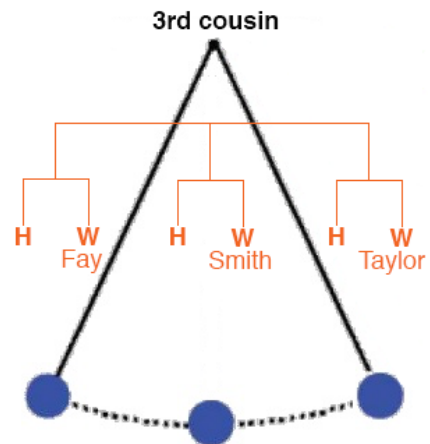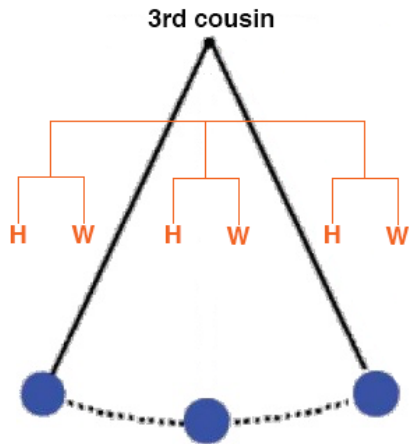**The Pendulum Search Method**

One of the more frequently tried methods of search we employ is called the Pendulum Search Method. Imagine your typical model of a pendulum:


If we take the point of suspension as the location of our closest cousin in our DNA results, and allow the pendulum weight to swing amongst younger generations of relatives, we want to look for surnames that distinguish themselves by the marriage/union between two spouses.

For instance, below is a typical scenario where a third cousin is the closest relative found in the DNA results of an adoptee. In this case, this third cousin married and had three children who all married later in life. With each marriage, a new surname (last name) was introduced into our pool of potential DNA relatives. For simplicity's sake, all three children of our third cousin are male. Each of their wives would typically have a unique surname. Our focus is to see if any of these unique surnames may also be amongst those relatives in our DNA cousin's family trees.

As the pendulum swings across these relatives, we find one of the three spouses has a name that is found amongst our DNA relative's surnames. In this example, I am using the AncestryDNA, **View All DNA Matches** results of the adoptee, to **Search Matches: Search by surname**.
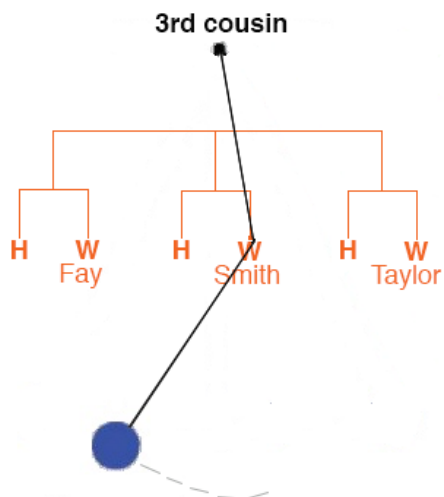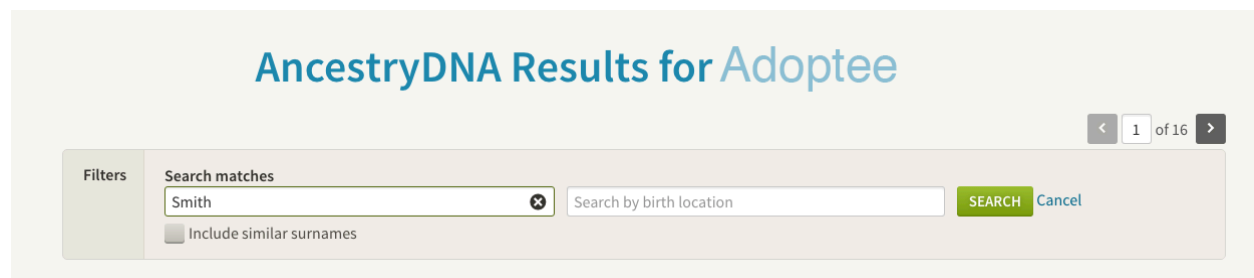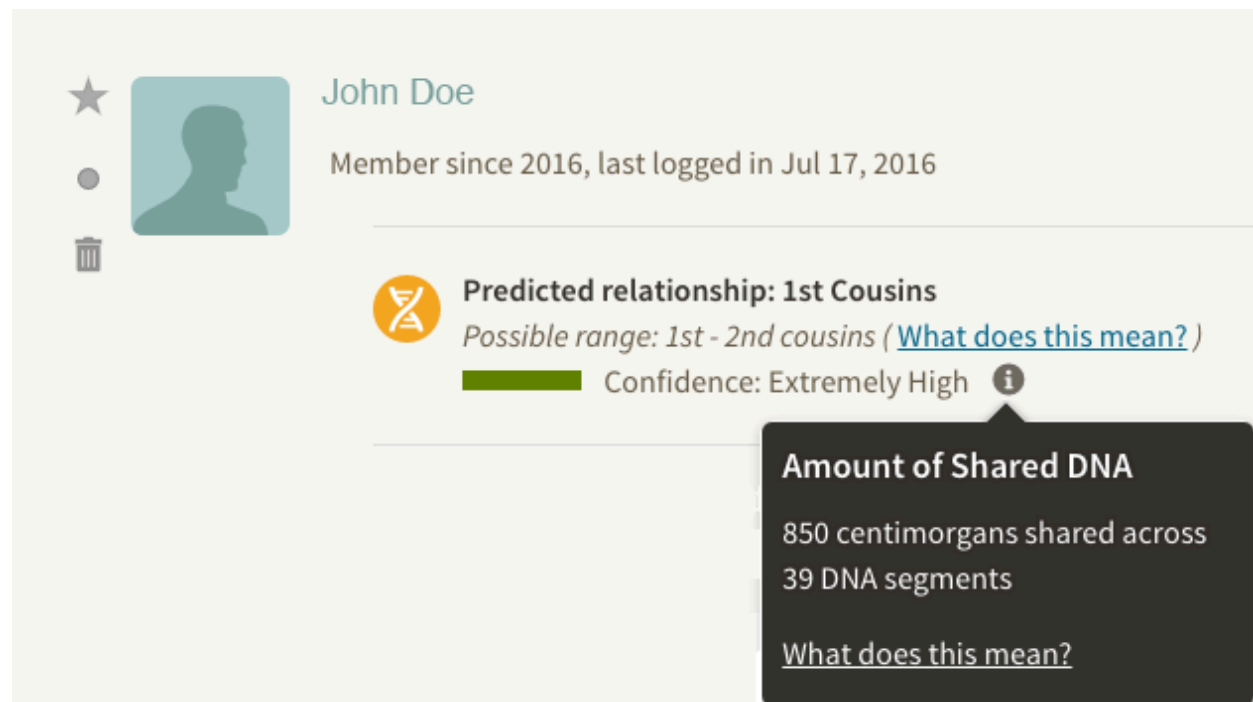

In this case, we found the surname 'Smith' shows up frequently in our list of surnames found amongst many of our DNA matches' family trees. This does not guarantee that if we look up the

wife's side of the family we will find another DNA relative. However, it is a starting point to check before proceeding on amongst other potential candidate surnames in the next generation.

With each generation and each marriage, a new surname is introduced, and the further the pendulum must swing across a long span of individuals introduced. Each time we come across a place where a surname is found amongst our relatives, one must check to see if it might lead up to other potential cousins.

Understand that this type of search method does not always apply if cousins marry cousins. However, it can still be very helpful to use as a basis to further investigate the branches introduced by each marriage and unique surnames that might lead us in the right direction.

Once a cousin is found, it is a good idea to check the cM or centimorgans that belong to that relative.

In the example above, AncestryDNA is predicting this relationship as a 1st cousin. If we click on the "i" we get more granular information about this particular relative's DNA shared results. It says the "Amount of Shared DNA" is 850 centimorgans. If we compare this number with the chart available on the International Society of Genetic Genealogy WIKI (http://isogg.org/wiki/), you will notice that this can be any number of potential familial relatives:

Average Estimated cMs for Autosomal Testing Comparisons

Autosomal DNA (atDNA) is inherited from both parents. This chart shows the average estimated cMs of atDNA shared with relatives. Every child gets 50% from each parent and does not necessarily inherit 25% from each grandparent. atDNA is randomly shuffled up in a process called recombination and the amount of atDNA is diluted with each new generation and therefore varies.
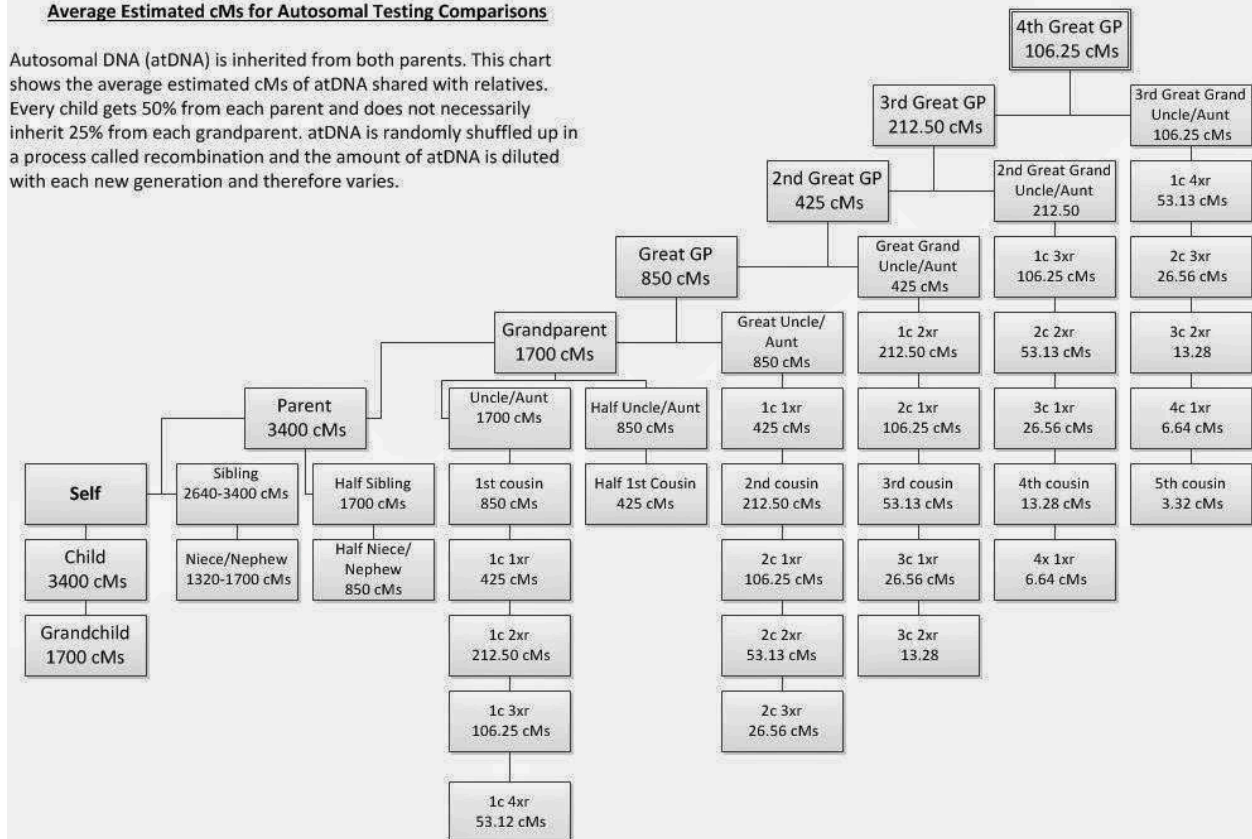
This individual could be a *half nephew, first cousin, half uncle or great uncle*. Each must be considered when trying to position their distance from the location where the adoptee will ultimately be placed on this family tree.

Ideally, we want to find two close relatives who have a common relative match with each other, and also are genetically related to our adoptee. However, this Pendulum Search Method can potentially work when two relatives cannot be found that share a common relative in their family trees.

Understanding the centimorgans we share between our adoptee and our closest relatives can help us narrow down our search so we are not searching too far away from these closest matches. Typically, I will change the home person on my Ancestry tree to be that of the closest cousin a tree is built out from. This way, I can always see what Ancestry.com is telling me the distance is amongst relatives added to the tree. To make this change on Ancestry.com, go to your tree's, **Tree Settings**, then make both the **Your home person in this tree** and **Who you are in this tree** the cousin you want to keep track of via their familial distance to the individuals you are adding onto the tree.

In the example below 'Mary Doe' is shown as a 'great-grandparent' in familial distance to the cousin we just set as 'you' in this family tree:

This change can be made as frequently as you like, in order to determine if you are still working at a distance that seems to match our centimorgan distance to cousins added to the tree. As stated before, there is no guarantee that this method won't be debunked by cousins who intermarry in a family, because those individuals always add more DNA to our adoptee, making some cousins appear significantly closer than they should in the results.

We find this method works well when unique surnames appear amongst our DNA results and when the individuals who are added to the family tree through marriage are well documented. The more cousins we can establish on a branch that the Pendulum Search Method finds, the better we can substantiate the proof that this may be a good place to focus our efforts on, rather than other couples in the family tree. If we happen to land on a couple whose children fall inside the generation in which one's birth parents were born, then the search may actually be close to a major discovery.