KANSEI ENGINEERING: TYPE I

THE MODERN DAY HAIR - TIE: A GLIMPSE IN 2050

BRIEF

USING THE TECHNIQUE OF KANSEI ENGINEERING: TYPE I, WE WERE REQUIRED TO UTILISE THIS METHOD TO ENABLE US TO REDESIGN THE EVERYDAY 'HAIR-TIE'.

WHAT IS KANSEI ENGINEERING?

KANSEI ENGINEERING AIMS AT THE DEVELOPMENT OR IMPROVEMENT OF PRODUCTS AND SERVICES BY TRANSLATING THE CUSTOMER'S PSYCHOLOGICAL FEELINGS AND NEEDS INTO THE DOMAIN OF PRODUCT DESIGN. IT WAS FOUNDED BY MITSUO NAGAMACHI, PROFESSOR EMERITUS OF HIROSHIMA UNIVERSITY.

WHAT IS TYPE I?

THE CATEGORY CLASSIFICATION IS A METHOD IN WHICH A KANSEI CAT EGORY OF A PRODUCT IS BROKEN DOWN IN THE TREE STRUCTURE TO GET THE DESIGN DETAILS.

THE MIGHTY HAIR - TIE

HAIR TIE IS A GADGET USED TO FASTEN HAIR, PARTICULARLY LONG HAIR, INTO A HAIRSTYLE. TWO KINDS OF HAIR TIE ARE THE SCRUNCHIE AND THE HAIRPIN. HAIR TIES ARE USEFUL IN SECURING ONE'S HAIR BACK TO KEEP IT AWAY FROM THE FACE AND TO GIVE SOME STYLE TO HAIR. WHEN USING A HAIR TIE AS A RUBBER BAND-LIKE WEAPON BY "SHOOTING" IT AT SOME PERSON, ANIMAL, OR OBJECT IT IS NOT UNCOMMON FOR THE METAL BRACE TO SLAM THE ONE DOING THE "SHOOTING" IN THE CUTICLE. THIS BACKFIRE OF SORTS IS VERY PAINFUL. ANOTHER TERM IS A "HAIR BINDER". A FASTENING DEVICE, TYPICALLY ORNAMENTAL, DESIGNED TO HOLD A WOMAN'S HAIR IN PLACE.

AN OVERVIEW OF THE PROCESS

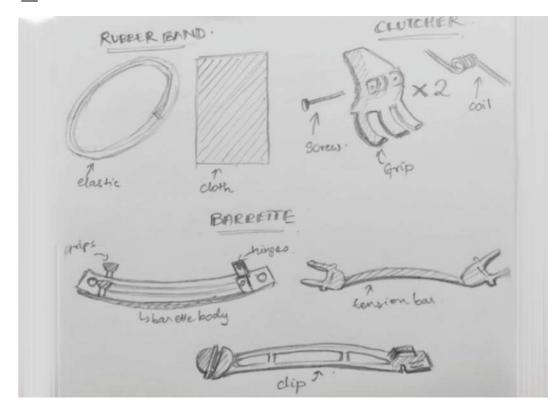
OUR FIRST TASK TO ESTABLISH OUR **LEVEL 0** PHRASE WAS TO EXTRACT WORDS FROM OUR SURVEY OF THE CURRENT IDEA OF WHAT A HAIR-TIE IS. WE INTERVIEWED 20 USERS AND EXTRACTED MULTIPLE KEYWORDS FROM WHICH WE WERE ABLE TO DRAW RELATIONS AND FORM OUR LEVEL 0 KEYWORD - **CONTROL.**

THEN WE REPEATED THE PROCESS THIS TIME EXTRACTING KEYWORDS
THAT RELATE TO USER'S FEELING OF CONTROL WITH RESPECT TO THE HAIR
CLIP. ONCE AGAIN, KEYWORDS WERE DRAWN UP AND LEVEL 1 WORDS
WERE DRAWN UP. THESE WORDS WERE THEN PRIORITISED USING SD
SCALES (OUR SUBJECTS WE.

THE PROCESS WAS REPEATED WITH LEVEL 2, 3 AND 4 WHERE USER SERVEY DETERMINED NEXT LEVEL KEYWORDS AS WELL AS PRIORITY ORDER USING SD SCALES.

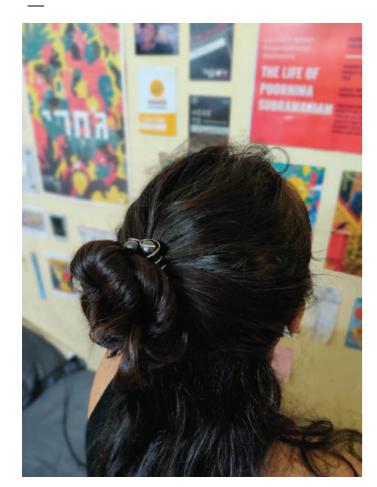
OUR KANSEI CATEGORY TREE HAS BEEN EXPANDED UNTIL LEVEL 2 AND 3.

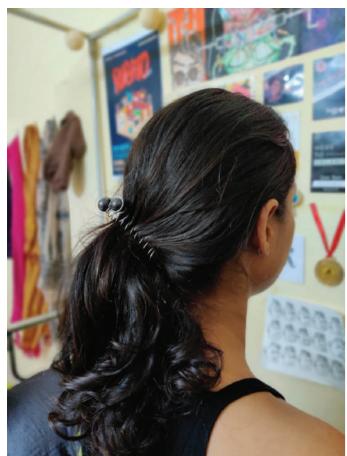
AN EXPLODED VIEW

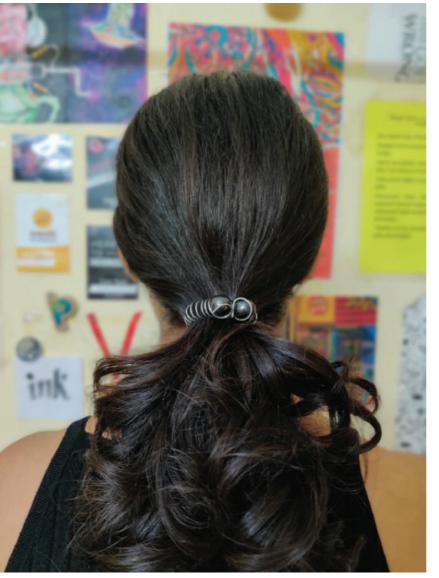


THE KANSEI CATEGORY TREE main body referencing the memory alloy - wire form - 3.5 inches mean/standard length SINGLE MATERIAL metal/alloy for it versatile use UNAMBIGUOUS SIMPLE sleek form NO EMBELLISHMENTS no protrusions stretching ability - hairband clipping/open-close mechanism - barrette **FAMILIAR** reuse of coil action - clutcher main body itself acts as clipping/tying tool VISIBLE MECHANISM **AFFORDANCE** no extra appendages visible ends of hair-tie - ends can be connected iOT, user driven command system **EXTENDED BODY** external control could be any personal device owner carries around. eg. phone cloud/ data storage space that user and hair-tie can tap into external control could be through common mode of owner's interaction with digital world. eg. speech **RESPONSIVE** closing - symbolic sound - through speaker (one end of hair-tie - seamless integrated sound output) SOUND changing hairstyles - iconic sounds/ beep - develop system of sound to hairstyle complementary to all sound feedback **HAPTIC** informs user of undesirable state of fit (eg. if hair tie loosens or is too tight) informs user of undesirable state of hair (eg. if hair becomes greasy due to sweat) CONTROL OLFACTORY — environment - on command, can release mild fragrance when hair is in undesirable state (eg. hair after playing a sport) - through ducts (one end of hair-tie - seamless integrated pores) **ADAPTABLE** FIT ELASTICITY — based on material chosen, spring like form can support expansion, compression, twisting, etc. LEVELS OF TIGHTNESS — continuous and not fixed. User can manipulate effective length/ compression free-form body - ability for clip to change manner of tying based on user's desired fit/ tightness. (eg. full ponytail - tight to bun - relatively relaxed) DIFFERENT STYLES OF WEARING FEEL/TACTILITY CHANGE IN TEXTURE — different sleeves for the hair clip - cloth based (for those who prefer softer hair-tie to solid robust hair-tie) temperature control through alloy - mild heating and cooling to avoid burning/freezing hair-radiation (eg. person is feeling cold - hair-tie radiates heat on command, keeps person warm) CHANGE IN TEMPERATURE CHANGE IN COLOUR — every textured sleeve has ability to change colour based on extended control or interaction command **VISUAL TRANSFORMATION** by user. CHANGE IN SHAPE — change in form covered through different hairstyles and material type (mouldable nature). **TYING HOLD HAIR PERFECTLY CLASPING** SMALL — 3" - 4" in total length **HANDY** DURABLE — made of metal/alloy LIGHT - WEIGHT **EXPECTATIONS ACCESSIBLE** DISTINGUISHABLE spring like form - people don't carry springs around with them - hence identifiable sound/haptic feedback when user looks for clip - can control this through extended user controls ATTACHABLE body can be tied around hand, attached to keys, clipped to any alloy/magnetic/metal surface - Can achieve this through clip ends

THE FINAL PRODUCT (A PROTOTYPE)







OUR MATERIAL

IN 2050, WE PREDICT THERE TO BE A MATERIAL, THAT IS EASILY MOULDABLE AND CAN RETAIN IT'S SHAPE IN DIFFERENT POSITIONS WITH EASE. HOWEVER IT CAN EASILY ACHIEVE ITS PREVIOUS POSITIONS WITH EASE. THIS CHANGE IN FORM CAN BE ACHIEVED THROUGH EXTERNAL COMMAND OR ENVIRONMENTAL CIRCUMSTANCES RATHER THAN EFFORT PROVIDED BY THE USER. THIS MATERIAL CAN EASILY INTEGRATE DIGITAL CHARACTERISTICS TO IT AND CAN MODERATE TEMPERATURE CHANGES. THIS WOULD BE AN INNOVATION IN THE AREA OF MATERIALS AND FURTHER DEVELOPMENT TO THE CURRENT DAY 'MEMORY ALLOY'.













THE PRODUCT PROTOTYPE IN ACTION - IT'S ABILITY TO ACHIEVE DIFFERENT METHODS OF TYPING/CLASPING

THE PRODUCT PROTOTYPE