What can Doodles on the Arm teach us about On-Body Interaction?

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The skin as an interaction surface is increasingly receiving attention in the HCI community. There is a large body of work demonstrating how interactions typically designed for devices can be transferred to human skin. While we recognize the potential of these systems, we suggest that on-body systems need not be limited to that. Instead of mapping actions from devices to the body, we suggest on-body interaction can be used to enhance behaviors we already engage with. We believe that on-body interactions deserve to be considered for their own merit, not just as an extension of existing devices.

To offer a complementary perspective on how we might design on-body interactions, we conducted a questionnaire asking if, how, and why people mark their skin. We recruited 108 participants aged 15 to 84 (M = 28, SD = 10). Only 15 people stated they 'never' mark their body, the remaining 93 at least 'rarely' do it and 18 of them do it 'often'. We used affinity analysis to find common body-marking behaviors. To the right we present the found behaviors as well as some sample quotes. A more detailed discussion can be found in our paper.

Location
- Arms, hands. Typically on the back of my hand for best visibility.
- hand for notes, around bellybutton, on arms, leg/ankle region, feet

Content

Reminders, To-Do lists
- i make notes to myself by writing in ballpoint pen on the back of my left hand. usually it's just one or two words. "evelyn" = i should write to evelyn. "cat litter" = i should buy cat litter.

Facts
- I write important stuff on my hand when I don't have a piece of paper on me. That's for example room numbers for my classes or the phone number/e-mail address of someone I just met.

Ornamental

Drawings, Doodles
- lines or small colored-in shapes, cursive letters or an interesting word, feathers or scales, eyes - usually nothing is bigger than an inch and a half square, and they're usually much smaller than that

Extending the Shapes of the Body
- more often single geometric shapes that somehow interconnect with natural body features (freckles, scars etc.).

Other Observations

Coincidental
- I mark my body on a regular base when working (waitressing(.We call it gastronomic-borderliner syndrom.You attach your pen to your Aprint in a way it leaves a mark on your wrist,whenever you start busy movement.The busier you are,the busier these marks get.It's a competitive game my coworkers and I play to see who works the "hardest ".

Culturally Situated
- I grew up in India, so it is normal to have henna on your body. It's not necessarily for a specific purpose but something that is so used to being done that it's not questioned.
- Well if you go somewhere that requires certain degree of dress code it doesn't look well to have marks on the skin, come on, it takes away all the glamour.

Reasons for Chosing the Body

No Other Option at Hand
- When I need to remember something but neither have paper nor a smartphone to write it down on.

Intrinsic to Application
- As sexual play. It's fun to mark other's skin.
- back when i was drinking ayahuasca, i used to paint my face with achiote. once for a butoh performance, i painted my face and limbs white.

Best Option, Given Context

Visibility
- To make sure I don't forget something: I see my hands a lot, and if they have something written on them, I notice, and I remember
- More likely to see notes on my hand then notes in my phone or on paper

Privacy
- short words or phrases. I try to make them obvious to me, but not to someone else who might glance over at them.

Ease of Access
- To carry information with me and have it accessible within an instant
- when I need a reference to go to the library and I don't want to get some papers out, to go and find the book quickly so I don't have to stay

Context

Multitasking
- Speaking on the phone I mark my arms, or place memory notes on my hands, shopping lists, stuff like that.

Boredom
- Usually in a situation where my mind is wandering, something akin to doodling

Educational setting
- In school I wrote on my hand often to remember things, and we would draw things as well. It was more common.

Changing locations
- When I need a reference to go to the library and I don't want to get some papers out, to go and find the book quickly so I don't have to stay.

Purpose of Marking

Pragmatic

Memory/Reminder/ Note Taking
- I only do it for things I really need to remember, things that if I forget there will be "serious" (at least to me) consequences or issues. Mostly though I only do it for important tasks that are very easy to forget about or overlook.

cheating
- I used to write stuff in my upper legs to copy during test at highschool and write stuff in my hands more often

Identification
- I marked my name and my husband's phone number during an airplane trip because I was sometimes fainting and I wanted to make sure he would be called if needed

Hedonic

Markings for Communicatrion

Games, Jokes
- Sometimes I make little faces on my fingers to entertain my daughter
- My friends and I used to play a drinking game with home-made cards that each had a unique set of instructions. One of these cards allows everyone in the game to draw all over one person. Also, a friend of mine used to pass out at the bar frequently. We drew on him. A lot.

Intimicy, Relations
- Actually when I think about it, it felt really empowering to draw on myself or even on others. It's sort of intimate and you feel like you really own your skin or the other's skin. It's really like leaving your mark or marking your territory, making something yours, for everyone to see.

Sexuality
- ...it has been with people I have been in a relationship with. I supposer it has something to do with the desire to own or mark for a moment the body of the object of desire.
- Others mark me often, but that's in a BDSM context.

Identification
- I marked my name and my husband's phone number during an airplane trip because I was sometimes fainting and I wanted to make sure he would be called if needed.
- when going out, a club/bar/party often puts a stamp or marking of some kind on your body to indicate you are a guest.

Private

Self-Affirmation
- very occasionally I will write the names of girls I envy in order to be reminded of my inferiority to them. The idea is that I'll get motivation to continue losing weight. I've written the names of boys I like too. For motivation.

Death
- The fear of dying and to what would happen to us after this event [...] the body is the only vehicle in which we travel, in which we carry those marks, those identity cues that differentiate us from others. "To acknowledge the body", just like when you go to identify a corpse.

Self Expression
- I have a strong relationship with writing as a way of expression in diverse contexts and circumstances. So writing on the skin, is an space, a canvas, a sheet, a place, to keep alive my game of writing.

Artistic Motivation
- I have had my body painted for photography projects in the past.

Spirituality
- I meditate and try to be 'mindful' (e.g. like the Kabat Zinn approach to mindfulness). So I tend to forget to do this, or forget to notice my breath, etc., and find it helpful to have a little reminder.